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Gender-Based Violence and Adolescent Sexual Health in Low- and Middle-Income Countries: A Systematic Reviews

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An abstract of
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Abstract

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By Julia S. Chen

Background. Gender-based violence (GBV) is a public health and human rights problem across the world, with known consequences for sexual and reproductive health (SRH). A recent review published in the *Journal of Sex Research* highlighted the lack of sexuality studies focused on the Global South, especially about topics related to intimate partner relationships and sexual violence (Dworkin et al., 2016). Yet there is evidence that physical and sexual intimate partner violence (IPV) and forced sexual debut are prevalent among adolescent girls and young women in low- to middle-income countries (LMICs).

Method. To fill a gap in the literature, this systematic review of reviews synthesized research on the relationship between GBV and SRH among adolescent girls and young women ages 10-24 in LMICs. Five forms of GBV were of interest: child abuse/maltreatment, female genital mutilation/cutting (FGMC), child marriage, IPV, and sexual violence. A search of PubMed, PsycINFO, and Scopus was supplemented with expert consultations, a reference list review, and a grey literature search of key websites.

Results. Results yielded 29 systematic reviews. Data were extracted from a random sample (*n* = 17) of the 83 unique studies included in the medium and high quality reviews based on AMSTAR criteria (Shea et al., 2007). Studies in the sample were primarily from Africa and tended to examine child abuse/maltreatment, FGMC, and IPV. Results demonstrated a consistent link between GBV exposures and SRH outcomes, such as abortion, sexual dysfunction, decreased sexual pleasure, sexually transmitted infections, and HIV. Findings were less consistent for gynecological and menstrual problems, pregnancy outcomes, sexual behaviors, and sexual empowerment.

Conclusions. This review suggests that GBV must be addressed globally through more longitudinal studies to promote SRH for adolescent girls and young women. Positive aspects of sexuality must be included in research and educational materials in order to combat GBV and improve SRH for all adolescent girls and young women.

Keywords: adolescent girls, gender-based violence, low- middle-income countries, sexual health, reproductive health

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Table of Contents

<u>SECTION</u>	<u>PAGE</u>
INTRODUCTION	1
METHOD	
Study Eligibility Criteria	
Procedure	
RESULTS	15
Quality Assessment Results	15
Characteristics of Included Reviews	16
Characteristics of Extracted Studies	17
Results from Extracted Studies	21
DISCUSSION	26
Limitations	28
CONCLUSION	29
REFERENCES	32
TABLES	49
Table 1. Eligibility Criteria for the Inclusion or Exclusion of Reviews	49
Table 2. Search Strings and Search Results for PubMed, PsycINFO, and Scopus	51
Table 3. Quality Assessment for Included Systematic Reviews	
Table 4. Characteristics of the Included Systematic Reviews	63
Table 5. Characteristics of Empirical Studies	65
Table 6. Extracted Results from 19 Unique Analyses Published in 17 Studies	72
FIGURES	76
Figure 1. Flow Chart Showing the Search, Screening, and Selection Process	76
APPENDICES	77
Appendix 1. Grey Literature Search Websites	77
Appendix 2. Eligible Studies from Data Extraction Not Yet Extracted	78

INTRODUCTION

Gender-based violence (GBV) is a significant global health problem that disproportionately affects all aspects of women's and girls' health. In 1993, the United Nations (UN) General Assembly adopted the Declaration on the Elimination of Violence against Women, in which violence against women was defined as "any act of gender-based 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, whether occurring in public or in private life" (UN General Assembly, 1993). Achieving gender equality, one of the UN's goals in the 2030 Agenda for Sustainable Development, includes ending all forms of discrimination against women and girls everywhere, all forms of violence in public and private spheres, and all harmful practices, such as female genital mutilation/cutting (FGMC) and early/forced marriage (United Nations Development Programme [UNDP], 2016). In order to achieve the goal of gender equality, it is necessary to fully understand the causes and challenges of GBV through a synthesis of the current state of knowledge. This systematic review of reviews provides insight into the relationship between GBV exposures and sexual and reproductive health (SRH) outcomes, especially among adolescent girls and young women in low- to middleincome countries (LMICs), a population that has been neglected in field of SRH research.

More young people between the ages of 10 and 24 are alive today than ever before; of that population, 600 million are adolescent girls (UN Population Fund [UNFPA], 2014). In addition, 89% of the world's adolescents and young adults live in lower-income countries (UNFPA, 2014). With such a substantial portion of the world's population concentrated in this age group, it is important to not neglect this population. Adolescence is a crucial time of development, when puberty and other biological and psychological changes take place,

influencing young people's relationships with others and their understanding of their own sexuality (Fatusi & Hindin, 2010). Adolescence and young adulthood are also periods of increased biological vulnerability for girls. Due to their still-developing reproductive and immune systems, adolescents are biologically more susceptible to human immunodeficiency virus (HIV) transmission and other sexually transmitted infections (STIs) (Andersson et al., 2008; Dehne & Riedner, 2001). Moreover, along with these vulnerabilities, education and access to SRH materials are scant for adolescent girls. Only 19% to 26% of 15- to 19-year-old girls in South Asia and sub-Saharan Africa displayed comprehensive knowledge about HIV (Santhya & Jejeebhoy, 2015). Moreover, unmet need for contraception remains high (25%) among married girls 15- to 19-years in sub-Saharan Africa and South Asia (Santhya & Jejeebhoy, 2015). Young age and lack of experience, education, and resources expose adolescent girls and young women to risks of violence, such as sexual and physical intimate partner violence (IPV) (Decker et al., 2014).

The current study focuses on five forms of GBV that affect adolescent girls and young women in LMICs based on prevalence and discussion in the literature: 1) child maltreatment/abuse, 2) FGMC, 3) child marriage, 4) IPV, and 5) sexual violence. Child maltreatment is the abuse of children under the age of 18. Child maltreatment includes a wide range of ill treatment, including physical, emotional, sexual abuse, neglect, and exploitation (World Health Organization [WHO], 2016a). This abuse inflicts potential harm to a child's development, health, life, and dignity in the context of a relationship of responsibility, trust, or power (WHO, 2016a). Estimates for past-year violence among 2- to 14-year-olds and 15- to 17-year-olds exceeded 50% for Africa, Asia, and Northern America, and exceeded 30% for Latin America (Hillis, Mercy, Amobi, & Kress, 2016).

FGMC is comprised of procedures that involve the partial or total removal of external female genitalia, or other injury to the female genital organs for non-medical reasons (WHO, 1997). The practice of FGMC often occurs before age 15, with the majority of procedures occurring before age 10 (Andro & Lesclingand, 2016). According to a recent United Nations Children's Fund (UNICEF) report, at least 200 million girls and women in 30 countries have undergone FGMC, with 44 million under the age of 15 (2016b).

Child marriage is a formal marriage or informal union of a child before the age of 18 (UNICEF, 2016a). Child marriage takes away the freedom and choice of a girl to decide when and whom to marry (Santhya & Jejeebhoy, 2015). Although most nations have stated their commitment to eliminate early or child marriage, with some even outlawing it, a high proportion of women aged 20 to 24 were married before the age of 18 in South Asia (44%) and sub-Saharan Africa (39%) (Santhya & Jejeebhoy, 2015). Furthermore, approximately 8% of girls aged 15 to 19 in each of these regions were married before the age of 15 (Santhya & Jejeebhoy, 2015).

IPV refers to behaviors committed by a current intimate partner or ex-partner that cause physical, emotional, psychological, and sexual harm (WHO, 2016b). Physical and sexual IPV and forced sexual debut among adolescent girls in LMICs are prevalent, with important regional and cross-national variations (Decker et al., 2015). Data from 81 countries suggested that 30% of women aged 15 and over have experienced physical and/or sexual IPV (Devries et al., 2013).

Finally, sexual violence is any sexual act (including forced sexual intercourse) or attempt directed against a person's sexuality using coercion (WHO, 2016b). Sexual violence can be committed by anyone to an individual regardless of their relationship status and setting (WHO, 2016b). Abrahams and colleagues (2014) derived an estimated global prevalence of non-partner sexual violence against women to be 5.2% to 9.1%. The WHO Multi-Country Study on

Women's Health and Domestic Violence against Women found that between 0.3% and 11.5% of women reported non-partner sexual violence since they were 15 years old, with over 5% of women reporting that their first sexual experience was forced in 10 of the 15 study settings (WHO, 2005).

Gender and Power

The root causes of GBV against women and girls are complex and multifaceted across many levels of society. According to the theory of gender and power, three social structures characterize the gendered relationships between men and women (Connell, 1987, 2009). The first structure is the sexual division of labor, which allocates men to the public workplace and women to the domestic and household sphere (Connell, 1987). The second structure is the sexual division of power, in which men are rewarded for domination and assertiveness, whereas women are considered deviant if they display these qualities. Instead, women are taught to embody purity and subservience to men (Connell, 1987). Women are expected to assume a passive role in their intimate relationships with men. The last structure is cathexis, or emotional attachment to someone. The structure of cathexis is based on social and cultural norms that define how women and men are expected to behave in a heterosexual relationship. Women are expected to be desired by and submissive to men, whereas men can objectify and control women (Connell, 1987). These double standards and social norms promote the dominance of men as a group over women as a group and, thus, perpetuate inequality between genders.

An ecological approach is essential to understanding GBV against women and girls because of the interplay between personal, situational, and sociocultural levels (Heise, 1998). Gender relations are constantly being created and recreated through direct and indirect interpersonal interactions (Connell, 2009). Social structures shape the way gender is practiced.

Inequality on a structural and societal level impacts these gendered relationships, and ultimately, the lives of women and girls.

Structural inequalities and societal norms promote gender differences in sexual behavior, such as how femininity norms and expectations force girls to be passive and attend to others' needs (Tolman, Striepe, & Harmon, 2003), further amplifying girls' vulnerability to violence. In many societies, women's sexuality must be restrained and shared with one partner, as opposed to having multiple partners, a behavior that is an accepted norm for men (Wingood & DiClemente, 2000). Kaagesten and colleagues (2016) found that adolescent boys and girls commonly endorsed norms that perpetuate gender inequalities. Adolescent girls and young women in LMICs are even more vulnerable to forms of violence. Child marriage is more common in impoverished areas, perpetuated by the need to ensure daughters' financial security (Nour, 2006). Other norms that prolong the practices of child marriage and FGMC are based on the notion that girls' sexuality should be reserved for a man's pleasure. These practices are to protect virginity, chastity, and sexual activity (Andro & Lesclingand, 2016; Nour, 2006).

Sexual and Reproductive Health

The UNFPA defines good SRH as "a state of complete physical, mental and social well-being in all matters relating to the reproductive system" (2016). SRH is grounded in universal human rights under various international conventions and treaties, such as the Universal Declaration of Human Rights, Convention on the Elimination of all forms of Discrimination Against Women, and Convention of the Rights of the Child (Sexual Rights Initiative [SRI], 2017; The World Association for Sexual Health [WAS], 2014). The WAS Declaration of Sexual Rights further reaffirms that an individual has the "right to decide whether to have children, the number and spacing of children, and to have the information and means to do so" (2014, p. 1).

SRH and rights also incorporate access to sexual education and information, protection from discrimination based on sexuality, and the inclusion of an open environment in which an individual can control and decide freely on sexual matters (SRI, 2017). Sexual health is not merely the absence of disease, nor is it important only during an individual's reproductive years (WHO, 2006). Sexual health also includes the ability to understand and weigh risks, responsibilities, outcomes, and impacts of sexual actions, as well as freedom from sexual abuse and discrimination (Office of the Surgeon General & Office of Population Affairs, 2001).

Sexual empowerment is another important aspect of SRH. Empowerment theorists have described empowerment as a combination of an individual's internal sense of power and control (Zimmerman, 1990) and the ability to control other resources (Riger, 1993). Peterson (2010) describes adolescent girls' sexual empowerment as multidimensional and process-oriented. Sexual empowerment is defined as a process whereby girls develop a subjective perception about themselves as sexual beings and gain more power and control over their own sexuality through healthy sexual experiences (Peterson, 2010). Aspects of sexual empowerment include a girl's sense of ability or self-efficacy to make decisions regarding her sexual health, as well as being able to refuse unwanted behavior and to ask for what she wants in a relationship (Peterson, 2010).

The SRH of adolescents requires multidimensional models specific to regional contexts.

Current models for adolescent sexual health often fail to acknowledge the role of gender

(Tolman et al., 2003). Hensel and Fortenberry (2012) advocate for adolescent sexual health

models to incorporate a wide range of outcomes, including access to contraception and STI

protection to promote positive sexual health development and primary prevention, regardless of a

young person's sexual experiences. SRH involves more than the right to comprehensive sexual

health education; it also includes development along the continuum of sexual empowerment, gaining a healthy understanding of self and interpersonal relationships. When a large proportion of young women indicate that their first sexual intercourse was unwanted (WHO, 2005), they may learn to take on a passive role in sexual relationships throughout their lives. A greater understanding of the connection between sexual health and the sense of psychological self-worth is in and of itself a form of empowerment for young women.

Relationships between GBV and SRH

In a public health context, gender-based inequities and unequal power relations render women and girls vulnerable to risk factors that may negatively affect their SRH. GBV is linked to many negative health outcomes for adolescent girls and young women, including SRH. It is critical to understand the experiences of GBV in childhood and adolescence as these experiences can affect a women's sexual health and psychosocial well-being across her life course.

Moreover, adolescent girls and young women in LMICs need attention in the area of GBV and SRH because of the unique vulnerabilities they have.

Sexual abuse in childhood has been linked to a range of negative SRH outcomes. Survivors of child sexual abuse (CSA) have been found to be at higher risk for sexual dysfunction (e.g., pain during sex, arousal problems, lack of desire) and for engaging in higher-risk sexual behaviors, such as unprotected sexual intercourse, sex with multiple partners, and early sexual debut (Maniglio, 2009). A meta-analysis of several studies has also indicated a relationship between experience of CSA and HIV risk behavior in women (Arriola, Louden, Doldren, & Fortenberry, 2005). A growing body of research also has also shown that physical and sexual abuse in childhood was associated with early menarche (Barrios et al., 2015; Henrichs et al., 2014; Romans, Martin, Gendall, & Herbison, 2003; Vigil, Geary, & Byrd-Craven, 2005).

Research also has demonstrated links between FGMC and negative SRH outcomes. In fact, FGMC has been found to be correlated with genital and reproductive tract infections (Diouf & Nour, 2013; Iavazzo, Sardi, & Gkegkes, 2013; Larsen & Okonofua, 2002). Furthermore, sexual desire and satisfaction were lower among women who have undergone FGMC (Alsibiani & Rouzi, 2010; Biglu, Farnam, Abotalebi, Biglu, & Ghavami, 2016; Rouzi et al., 2017). Moreover, FGMC is correlated with earlier pregnancies and pregnancy complications such as prolonged labor and obstetric lacerations (Berg & Underland, 2013; Larsen & Okonofua, 2002).

Child or early marriage can have detrimental effects for a girl or young woman's SRH. Early pregnancy is often associated with early marriages (Uthman, 2008; Kaphagawani & Kalipeni, 2016). Early pregnancies can then lead to pregnancy complications, such as obstetric fistulas before an adolescent girl is fully developed to bear children (Melah et al., 2007; Muleta, Fantahun, Tafesse, Hamlin, & Kennedy, 2007). Moreover, many survivors of child marriage also experience physical or sexual IPV, which can lead to higher odds of unintended pregnancies and pregnancy complications (Anand, Unisa, & Singh, 2017; Raj, Saggurti, Balaiah, & Silverman, 2009; Santhya, 2011). In addition, in some regions of sub-Saharan Africa, the experience of physical or sexual IPV among married girls was as high as 30% (Santhya & Jejeebhoy, 2015). IPV also can affect a young woman's sexual autonomy, increase her risk of an unintended pregnancy, and necessitate multiple abortions (Sarkar, 2008). Among adolescent girls in Johannesburg, South Africa, past-year physical or sexual IPV was found to be significantly associated with multiple past-year sex partners, pregnancy, and transactional sex (Decker et al., 2014).

Non-partner sexual violence also can be harmful to the SRH of young women. Sexual violence has been correlated with early sexual debut and unintended pregnancies (Baumgartner,

Geary, Tucker, & Wedderburn, 2009; Decker et al., 2015). Similar to IPV, in Johannesburg, South Africa, non-partner sexual violence was found to be associated with condom nonuse at last sex, multiple past-year sex partners, pregnancy, and transactional sex (Decker et al., 2014). Most of the research regarding sexual violence comes from high-income countries; furthermore, these studies mainly focus on interventions for sexual assault on college campuses (Ellsberg et al., 2015).

Of the literature focused on LMICs, researchers have primarily explored the relationship between GBV and SRH in terms of FGMC risk factors and obstetric complications and consequences (Andro & Lesclingand, 2016; Berg & Underland, 2013; Berg et al., 2014). A review of empirical studies in southern Africa has shown that unequal power relations between genders, such as the absence of choice for women to negotiate condom use, are a foundation for both HIV and GBV (Andersson, Cockcroft, & Shea, 2008). Although some studies on the sexual behaviors and biological effects of GBV among adolescent women in LMICs exist (Chacham, Simao, & Caetano, 2016), gaps in the literature persist regarding more psychosexual impacts of GBV on SRH, such as sexual autonomy and feelings of entitlement to self- and partner-induced sexual pleasure (Emmerink, Vanwesenbeeck, van den Eijinden, & ter Bogt, 2016). Gaps also exist in our understanding of adolescent girls and young women in rural areas, as most of the research is conducted in urban areas (Chacham et al., 2016; Decker et al., 2014; Mmari & Astone, 2014).

Most of these analyses, interventions, and solutions are built upon a western political framework. Researchers in the public health field have described FGMC as an "old" or "primitive" practice (Clarke & Richens, 2016; Megafu, 1983), ignoring the cultural and social reasons that sustain this practice. More research is needed in the field of GBV and SRH,

especially in LMICs and must incorporate the risk factors and consequences of GBV in the recurring cycle of abuse.

The Current Study

Research on GBV and SRH come from mainly industrialized and high-income countries. Dworkin, Lerum, and Zakaras' (2016) review of research published in the *Journal of Sex Research* from 1965-2014 demonstrated the lack of sexuality studies focused on the Global South (Sub-Saharan Africa, South, Southeast, and parts of East Asia, Central and South America, and the Middle East). They found that only 4.8% of papers were from the Global South and that topics related to intimate partner relationships and sexual violence made up only 3.8% of publications focused on the Global South. To our knowledge, this is the first systematic review of reviews conducted on GBV exposures and SRH outcomes in adolescent women in LMICs.

We conducted a systematic review of reviews providing a qualitative analysis of the literature on the SRH effects of GBV exposure among adolescent girls and young women in LMICs. With the increasing knowledge of the relationship between GBV and SRH, it is important to conduct a systematic review of reviews to assess the consequences of and implications for SRH resulting from exposure to often multiple forms of GBV.

METHOD

Study Eligibility Criteria

Systematic reviews had to meet the following criteria for inclusion (Table 1): 1) original peer-reviewed or non-peer reviewed reviews that included some reference to quantitative associations between exposures and outcomes of interest, 2) focused on at least one SRH outcome of interest, 3) addressed at least one of the forms of GBV, 4) included at least one study from a LMIC, 5) included at least one study that analyzed women and girls separately from men

and boys, 6) included at least one study that overlapped the target age group of 10 to 24 years, 7) published in the English language, 8) and published between January 1, 2000 to the date of the search (November 6, 2016). The research team developed search terms through multiple meetings. For the PubMed search, the research team incorporated Medical Subject Headings (MeSH; Lowe & Barnett, 1994).

Types of Reviews

Forms of GBV

We defined reviews as a systematic review or meta-analysis. In instances where it was not explicitly stated, we considered a review to be systematic if it employed a detailed methodological search strategy with specified electronic databases and search terms.

Although GBV has many forms, we focused on five types: 1) child abuse/ maltreatment, 2) FGMC, 3) child marriage, 4) physical, psychological, and sexual IPV, and 5) sexual violence perpetrated by individuals other than one's partner. While we recognized that there is subsequent causation (i.e., GBV at a young age can also cause GBV later in life) (Dunkle et al., 2004), revictimization and poly-victimization, experiences of multiple forms of GBV (Le, Holton, Romero, & Fisher, 2016), were not assessed as outcomes.

SRH Outcomes

We focused on a breadth of SRH outcomes that were selected through literature review and research group discussions. These outcomes included pregnancy complications, sexual function, sexual behavior and risk, menstruation, sexual empowerment, STIs, contraception, and abortion. For more details on our specific search terms, please see Table 2. Although important, we did not examine pre-natal abuse, fertility, or other outcomes related to a woman's infant. While SRH is also important for boys and men, our focus was on the SRH of adolescent girls

and young women (aged 10-24) because of the specific SRH consequences that can affect the trajectory of adolescent girls and young women's lives in the areas of sexuality, marriage, and childbearing.

Study Populations

The UN and WHO classify adolescence as a period of development and transition in between childhood and adulthood, between the ages of 10- to 19-years-old (WHO, 2017). In addition, "young people" are those aged 10 to 24, and "youth" are those aged 15 to 24 years (UN General Assembly, 1981). Our target population was adolescent girls and young adult women between the ages of 10 to 24 at the time the outcome was measured. We examined GBV exposures occurring in childhood and adolescence and young adulthood.

Countries and Geographic Regions

Using the World Bank classifications of country income levels (World Bank, 2017), we focused on LMICs (including lower middle and upper middle) for this review. Specific country names, as well as general terms, such as "developing country," were used (Table 2). Refugees from LMICs and resettled populations in high-income countries were not included. Because of the difficulties to group shared experiences due to different contextual factors, resettled and refugee populations and their experiences with GBV and SRH required their own systematic review of reviews.

Procedure

Information sources and search strategy

Table 2 displays the final search strings and search results for all three databases. The authors employed a systematic search strategy using PubMed and PsycINFO electronic databases on November 1, 2016. The PsycINFO search yielded no reviews that matched the

criteria. A search on a third database, Scopus, was conducted on November 6, 2016. Following AMSTAR guidelines to capture unpublished work, we conducted three supplemental search strategies: hand searches of the reference lists within included review articles, consultations with experts of our included reviews via email by December 31, 2016, and grey literature searches conducted on organizational websites (see Appendix 1 for a list of searched websites). These supplemental search strategies allowed us to capture reviews that may not have appeared in electronic database search results.

Screening

The first author conducted a title and abstract screening for review articles identified through the database searches. A second reviewer independently screened 25% of the reviews. Reviewers discussed discrepancies and uncertainties until a consensus was reached. Both reviewers conducted full-text screening of all reviews that passed the title and abstract screening. In addition, the second reviewer conducted a hand search of the reference lists of the final included reviews, while the first author consulted with the corresponding authors of the final included reviews. Email correspondence was made with the authors, and up to three follow-up emails were sent if was no response was given. Email requests asked experts to indicate any systematic reviews (published and unpublished) that met our specific criteria.

Selection Results

Figure 1 summarizes the search, screening, review, and selection processes. The initial database searches yielded a total of 220 articles, of which six were duplicates (Figure 1, Box 1 and 2). The title and abstract screening process eliminated 192 articles, leaving 22 to be assessed for eligibility through full-text review (Figure 1, Box 3 and 4). After full-text screening, only 11 reviews met the pre-established eligibility criteria (Figure 1, Box 7). The supplemental reference

list search produced eight additional reviews (Figure 1, Box 8), and the expert consultation and the grey literature search added another ten reviews (Figure 1, Box 9). In total, 29 reviews met the eligibility requirements and were rated for quality (Figure 1, Box 10).

Quality assessment

All eligible reviews were rated for quality using Assessment of Multiple Systematic Reviews (AMSTAR), an 11-item assessment tool validated to evaluate the methodological quality of systematic reviews (Shea et al., 2007). Example criteria included whether a review had a comprehensive literature search performed, whether a list of included and excluded studies was provided, and whether the scientific quality of included studies was assessed and documented (Shea et al., 2007). The research team focused on the goal of reproducibility of methods in each review. The first author independently assessed the quality of all reviews using AMSTAR, and the second and third author each assessed half as duplicate ratings. Meta-analyses were scored out of 11 points due to two AMSTAR criteria that pertained only to meta-analyses, while systematic reviews were scored out of nine. Since only nine reviews were meta-analyses, review quality ratings were classified in three score categories out of a total of nine points: low (0-3), medium (4-6), and high (7-9). All discrepancies were discussed among raters until a consensus was reached.

Data Extraction and Analysis

To draw conclusions about the relationship between GBV and SRH among adolescent girls and young women in LMICs, a systematic approach was used to extract study-level data from the medium- and high-quality reviews. All studies in a review were eligible, including those published before 2000, and were listed on a spreadsheet. The first author and a second reviewer examined studies for eligibility based on the same criteria used at the review level: data

collected in an LMIC, English language publication, women/girls analyzed separately, and at least one specific exposure and one outcome of interest.

Out of all included studies (N = 800), only 83 studies were deemed eligible for data extraction. Due to the length of time to screen texts for eligibility, a sample (20%) of the total eligible studies was randomly selected for this thesis and the rest will be extracted for submission to an academic journal. Data were extracted for the following variables: study site, data collection years, study design (including procedure, sampling strategy, and eligibility criteria), participant information, statistical methods, study quality (as rated in original review), limitations noted by authors, GBV exposures, SRH outcomes, and results.

RESULTS

Quality Assessment Results

The 29 eligible reviews were rated using AMSTAR criteria (Table 3). One review (Berg, Odgaard-Jensen, Fretheim, Underland, & Vist, 2014) was an update of a previous publication (Berg & Underland, 2013), and was therefore dropped from the remainder of the data extraction process. Overall, 57% (n = 16) of reviews scored between 0 and 3, 36% (n = 10) of reviews scored between 4 and 6, and 7% (n = 2) of reviews scored between 7 and 9. All but one review (Gilbert et al., 2015) had established an *a priori* study design. Fifty-seven percent (n = 16) of the reviews documented a duplicate selection and data extraction process. Thirty-six percent (n = 10) of the reviews employed a comprehensive literature search using at least two named electronic databases (with key words and search years provided) and at least two supplementary search methods. Half of the reviews (n = 14) included peer- and non-peer reviewed studies and stated whether any articles were excluded or included based on language. Twenty-four percent (n = 7) rated the quality of each of the studies in their review and discussed the quality and implications

of ratings in the results and conclusion. However, two studies (Kimani, Muteshi, & Njue, 2016; Norman, Byambaa, De, Butchart, Scott, & Vos, 2012) did not provide the specific ratings for each study but did discuss quality. Only one study (Shamu, Abrahams, Temmerman, Musekiwa, & Zarowsky, 2011) provided quality ratings for each study, but had no discussion of the ratings. Of the nine meta-analyses, one-third (n = 3) performed tests on publication bias (Hall, Chappell, Parnell, Seed, & Bewley, 2014; Maxwell, Devries, Zionts, Alhusen, & Campbell, 2015; Norman et al., 2012). Finally, none of the reviews stated a conflict of interest for all included studies and the review itself.

Characteristics of Included Reviews

A summary of the 12 medium- and high-quality reviews from which data were extracted is provided in Table 4. Only one review had an exclusive focus on adolescents (Meinck, Cluver, Boyes, & Mhlongo, 2015). The total number of studies included in all these reviews was 800, ranging from 10 (Maxwell et al., 2015) to 364 (UNICEF, 2012). Half of the studies (n = 399) were focused on LMICs. Most of these studies on LMICs (n = 185) were sourced from the UNICEF review on child maltreatment (2012). The proportion of studies in each review that were focused on LMICs ranged from 4.8% (Norman et al., 2012) to 100% (Meinck et al., 2015; Shamu et al., 2011; Thornton & Veenema, 2015). Only 28% (n = 221) of the total studies analyzed women and girls separately from boys and men. Ultimately, 41 studies performed separate analyses for adolescent girls and young women in LMICs and were included in the data extraction.

In terms of the GBV exposures of interest, one-third focused on child abuse, specifically CSA (n = 4), one-third of the reviews (n = 4) addressed FGMC, one-third (n = 4) focused on IPV, and one-third (n = 4) focused on sexual violence. None of the 12 reviews focused on child

marriage. A third of reviews examined more than one GBV exposure. Specifically, one review examined child abuse and sexual violence among adolescents and young adults (Thornton & Veenema, 2015) and three reviews examined both IPV and sexual violence (Hall, Chappell, Parnell, Seed, & Bewley, 2014; Li et al., 2014; Shamu et al., 2011).

Regarding SRH outcomes, half of the reviews (n = 6) focused on more than one SRH outcome. More than half (n = 7) of the reviews addressed STIs (mainly HIV). One-fourth (n = 3) addressed gynecological problems (Berg, Underland, Odgaard-Jensen, Fretheim, & Vist, 2014; Kimani et al., 2016; UNICEF, 2012), and 42% (n = 5) reviews discussed unintended pregnancies and obstetric complications (Berg & Underland, 2013; Berg et al., 2014; Kimani et al., 2016; Shamu et al., 2011; UNICEF, 2012). A fourth (n = 3) of the reviews discussed gynecological problems (Berg et al., 2014; Kimani et al, 2016; UNICEF, 2012). Only a sixth (n = 2) focused on contraception (Maxwell et al., 2015; Meinck et al., 2015). One fourth (n = 3) of the reviews discussed sexual risk behavior (Norman et al., 2012; Shamu et al., 2011; UNICEF, 2012). Another quarter of reviews (n = 3) assessed sexual function (Berg & Denison, 2012; Berg et al., 2014; Kimani et al, 2016). Finally, only one review focused on abortion (Hall et al., 2014). The Meinck (2015) review contained no studies that fit our data extraction criteria. Eight of the studies in the Meinck review included analyses of girls and women separately, but upon closer inspection none were specific to our SRH outcomes.

Characteristics of Extracted Studies

Data were extracted from 20% (n = 17) of the publications that explored the relationship between GBV and adolescent SRH in LMICs (Table 5). Although there were 83 eligible studies included in the 12 medium- to high-quality reviews, a random sample was extracted for this thesis Appendix 2 provides the full list of studies for which data will be extracted for the

manuscript submission.

Studies had a variety of population samples. Most studies included combined samples of adolescent and adult women. Only four of the studies focused on samples that were exclusively within the 10- to 24-year age range (Brewer, Potterat, Roberts Jr, & Brody, 2007; Jewkes et al., 2006; Kalyanwala, Zavier, Jejeebhoy, & Kumar, 2010; Speizer et al., 2009). Within these four studies, three included samples of individuals who were unmarried (Brewer et al., 2007; Kalyanwala et al., 2010; Speizer et al., 2009) and one did not assess marital status (Jewkes et al., 2006). One study specifically focused on unmarried virgins (Brewer et al., 2007). Of the mixed adolescent/adult samples, nine studies included samples of married or partnered women and three studies did not assess marital status (Browning, Allsworth, & Wall, 2010; Caceres, Vanoss Marin, & Sid Hudes, 2000; Kanki et al., 1992). Four studies included samples of pregnant women (Dunkle et al., 2004; Kalyanwala et al., 2010; Kiarie et al., 2006; Wu, Guo, & Qu, 2005). A total of 19 unique analyses were present in the 17 empirical studies because two studies had cross-sectional and longitudinal designs (Kacanek et al., 2013; Kouyoumdjian et al., 2013). These two longitudinal designs were also randomized control trials. Almost all studies (88%, n =15) were cross-sectional designs. However, one study conducted case reviews (Browning et al., 2010) and another matched their sample with demographic surveillance data (Jackson, Adongo, Bawah, Feinglass, & Phillips, 2005).

The random sample of studies had a limited geographic scope, but a wide variety of sampling frames. The samples represented Africa (71%, n = 12), North Africa (6%, n = 1), Asia (12%, n = 2), South Asia (6%, n = 1), and South America (6%, n = 1). Eighteen percent (n = 3) of the studies utilized a nationally representative sample: Kenya (Brewer et al., 2007), China (Luo et al., 2008), and South Africa (Speizer et al., 2009). Most (47%, n = 8) of the studies

included urban samples, whereas 35% (n = 6) included mixed urban/rural populations, and only 18% (n = 3) drew from rural populations. Many (41%, n = 7) of the studies relied on convenience samples (Dunkle et al., 2004; Jewkes et al., 2006; Kacanek et al., 2013; Kanki et al., 1992; Kiarie et al., 2006; Megafu, 1983; Wu et al., 2005). Multiple (41%, n = 7) included a clinical (Dunkle et al., 2004; Kalyanwala et al., 2010; Kanki et al., 1992; Kiarie et al., 2006; Megafu, 1983), hospital (Wu et al., 2005), or mixture of hospitals/health centers/clinics sample (Elnashar & Abdelhady, 2007). Another performed a secondary analysis of a stratified, two-stage probability sample (Stewart, Morison, & White, 2002). Twelve percent (n = 2) utilized a probability sample (Brewer et al., 2007; Luo, Parish, & Laumann, 2008). Twenty-four percent (n = 4) randomly selected their participants (Caceres et al., 2000; Elnashar & Abdelhady, 2007; Speizer et al., 2009; Wu et al., 2005).

Only a few (n = 2) of the selected studies involved more than one form of GBV (Jewkes et al., 2006; Kouyoumdjian et al., 2013). Eighteen percent (n = 3) of the studies examined CSA (Jewkes et al., 2006; Kouyoumdjian et al., 2013; Luo et al., 2008). Forty-one percent of the studies (n = 7) looked at the effects of FGMC in women (Brewer et al., 2007; Browning et al., 2010; Elnashar & Abdelhady, 2007; Jackson et al., 2005; Kanki et al., 1992; Megafu, 1983; Stewart et al., 2002). In addition, 29% (n = 5) of the studies examined IPV (Jewkes et al., 2006; Kacanek et al., 2013; Kiarie et al., 2006; Kouyoumdjian et al., 2013; Wu et al., 2005) and another 29% (n = 5) examined sexual violence (Caceres et al., 2000; Dunkle et al., 2004; Jewkes et al., 2006; Kalyanwala et al., 2010; Speizer et al., 2009). Most studies of IPV and CSA assessed multiple types (Jewkes et al., 2006; Kacanek et al., 2013; Kiarie et al., 2006; Kouyoumdjian et al., 2013; Wu et al., 2006; Kouyoumdjian et al., 2013; Wu et al., 2005). For example, Jewkes and colleagues (2006) examined different forms of child abuse (sexual, emotional, and neglect) and IPV (physical and

sexual). Most measures of GBV were author-created, although three studies used modified versions of existing instruments: The Child Trauma Questionnaire (CTQ; Jewkes et al., 2006), US National Health and Social Life Survey (US-NHSLS; Luo et al., 2008), WHO Violence Against Women instrument (Jewkes et al. 2006) and the Conflict Tactic Scale (CTS2); Kouyoumdjian et al., 2013).

A variety of SRH outcomes was examined in the studies. Almost half (47%, n = 8) of the studies examined STIs, of which 75% (n = 6) specifically assessed HIV infection (Brewer et al., 2007; Jewkes et al., 2006; Kanki et al., 1992; Kiarie et al., 2006; Kouyoumdjian et al., 2013; Speizer et al., 2009). Sexual behavior also was explored in 47% (n = 8) of the studies, including age of sexual debut (Caceres et al., 2000; Dunkle et al., 2004; Kiarie et al., 2006), pre-marital first coitus (Megafu, 1983), intercourse frequency (Stewart et al., 2002), number of partners (Caceres et al., 2000; Jewkes et al., 2006; Kacanek et al., 2013; Luo et al., 2008), sex outside the current relationship (Luo et al., 2008), transactional sex (Caceres et al., 2000; Jewkes et al., 2006; Kacanek et al., 2013), sex under the influence of alcohol or drugs (Caceres et al., 2000), masturbation (Luo et al., 2008), thinking about sex often (Luo et al., 2008), and having a high variety of sex practices (Luo et al., 2008). Twenty-nine percent (n = 5) of the studies examined contraceptive use (Jackson et al., 2005; Jewkes et al., 2006; Kacanek et al., 2013; Kiarie et al., 2006; Speizer et al., 2009). Unwanted pregnancies and obstetric complications were examined in four (24%) of the studies (Browning et al., 2010; Caceres et al., 2000; Elnashar & Abdelhady, 2007; Speizer et al., 2009). Eighteen percent (n = 3) of the studies looked at sexual function (Elnashar & Abdelhady, 2007; Luo et al., 2008; Megafu, 1983). Abortion was the outcome in 12% (n = 2) of the studies (Kalyanwala et al., 2010; Wu et al., 2005). Partner risk behavior (infidelity), which affects the SRH of the adolescent girl or young woman directly, was found in

12% (*n* = 2) of the studies as well (Kacanek et al., 2013; Luo et al., 2008). Finally, only one study examined gynecological problems (Elnashar & Abdelhady, 2007), menses (Elnashar & Abdelhady, 2007), and sexual empowerment (Luo et al., 2008).

The four adolescent-focused studies had limited scope in exposures and outcomes compared to the mixed adult/adolescent studies, although it is difficult to assess with such a small number. These four studies assessed child abuse, FGMC, IPV, and sexual violence. However, the study by Jewkes and colleagues (2006) was the only study that examined a variety of GBV exposures of IPV, CSA, and sexual violence. The studies by Brewer and colleagues (2007) focused on FGMC; whereas, Kalyanwala (2010) and Speizer (2009) focused only on sexual violence. Regarding SRH outcomes, the adolescent-focused studies assessed STIs (Brewer et al., 2007; Jewkes et al., 2006; Speizer et al., 2009), contraception (Jewkes et al., 2006; Speizer et al., 2006), abortion (Kalyanwala et al., 2010), and early pregnancies before age of 18 (Speizer et al., 2009).

Results from Extracted Studies

Table 6 synthesizes results from the data extraction across major SRH outcomes in the sample of 17 studies for this thesis. Child marriage exposures were not included because no articles assessed the link between this exposure and any SRH outcome.

Abortion

Abortion was the outcome in 12% (n = 2) of the studies (Kalyanwala et al., 2010; Wu et al., 2005). Both were conducted in hospital settings in Asia (urban India and urban/rural China). The first study found that women who obtained second-trimester abortions were more likely than those who obtained first-trimester abortions to have experienced forced sex (Kalyanwala et al., 2010). The second study found that abused women (physical and/or psychological IPV) were

more likely to obtain induced abortions than nonabused women (Wu et al., 2005). Only one of the adolescent-focused studies assessed abortion (Kalyanwala et al., 2010).

Contraception/STI Prevention

Twenty-nine percent (n = 5) of the studies examined the relationship between GBV and contraception use (Jackson et al., 2005; Jewkes et al., 2006; Kacanek et al., 2013; Kiarie et al., 2006; Speizer et al., 2009). Overall, negative associations or no associations were found between GBV and using contraception/STI prevention. Specifically, no association was found between FGMC and use of any contraception (pill, intrauterine device, diaphragm, foam, condom, or male sterilization) in a study from Northern Ghana (Jackson et al., 2005). Similarly, a longitudinal study in South African and Zimbabwean samples found a that women's experience of psychological, sexual, and two or more types IPV was negatively associated with condom and diaphragm use, although physical IPV was only associated with condom use (Kacanek et al., 2013). However, two studies in Africa found no significant association between experiencing at least two forms of IPV and condom use (Jewkes et al., 2006; Kiarie et al., 2006). Two of the adolescent-focused studies examined contraception (Jewkes et al., 2006; Speizer et al., 2009). One of the adolescent-only studies found that having experienced forced sex was related to less likelihood of using a condom at last sex (Speizer et al., 2009).

Gynecological and Menstrual Problems

Only one study assessed the relationship between GBV and gynecological and menstrual problems, and only explored FGMC as the exposure (Elnashar & Abdelhady, 2007). No other GBV measures were explored with these SRH outcomes. Experiencing FGMC was positively associated with greater levels of vaginal discharge, but not with burning or involuntary urination. In addition, women exposed to FGMC were more likely to experience menstrual problems, such

as irregular menses and dysmenorrhea. Although difficult to make conclusions from the lack of information, the results still suggest that FGMC could be an issue for adolescent girls SRH.

*Pregnancy**

Four studies examined pregnancy outcomes (Browning et al., 2010; Caceres et al., 2000; Elnashar & Abdelhady, 2007; Speizer et al., 2009). Elnashar and Abdelhady (2007) found a significant relationship between FGMC and pregnancy occurrence and pregnancy complications, such as episiotomies and tearing. On the other hand, Browning and colleagues (2010) found no clear associations between FGMC and obstetric fistula formations or between FGMC and fistula size, scarring, or presentation site (Browning et al., 2010). Sexual violence was not significantly related to experiencing an adolescent pregnancy (Speizer et al., 2009) or an unplanned pregnancy (Caceres et al., 2000). The results suggest no association between sexual violence and pregnancy, but a possible relationship between FGMC and pregnancy complication. Child maltreatment and IPV were not assessed in relationship to pregnancy outcomes. Only one of the adolescent-focused studies assessed pregnancy outcomes (Speizer et al., 2009).

Sexual Behavior

Forty-seven percent (n = 8) of the studies examined the relationship between GBV and sexual behavior. In general, GBV was associated with younger age of sexual debut and increased number of sexual partners. One study showed no association between contact-based CSA and the number of sexual partners (Luo et al., 2008). However, experiencing at least two forms of child abuse was positively associated with the number of sexual partners (Jewkes et al., 2006). Experiencing sexual or physical IPV was associated with having more than three sexual partners in the last year or having a casual partner (Jewkes et al., 2006). Eighteen percent (n = 3) of the studies showed that experiencing two or more forms of IPV (Kiarie et al., 2006) or experiencing

sexual violence (Caceres et al., 2000; Dunkle et al., 2004) was related to lower age of sexual debut. However, experiencing sexual coercion (physical or verbal pressure or physical force) was not associated with an increased number of sexual partners (Caceres et al., 2000). Associations were found between IPV and risk factors of HIV, which largely include sexual behaviors, such as having multiple sexual partners and participating in transactional sex (Jewkes et al., 2006).

Other sexual behaviors were explored in 35% (n = 6) of the studies. Twelve percent (n = 2) of the studies found a positive association between experiencing at least two forms of IPV and transactional sex (Jewkes et al., 2006; Kacanek et al., 2013). However, another study found no association between sexual violence and transactional sex (Caceres et al., 2000). Other sexual behaviors explored included sex under the influence of alcohol or drugs (Caceres et al., 2000), masturbation (Luo et al., 2008), thinking about sex often (Luo et al., 2008), high variety of sex practices (Luo et al., 2008), pre-marital first coitus (Megafu, 1983), and frequency of intercourse (high vs. low; Stewart et al., 2002). None of these outcomes were associated with experiences of GBV, with one exception. In one study, CSA experience was positively associated with thinking about sex often and having a high variety of sexual practices (Luo et al., 2008). Thus, there were mixed results regarding the relationship between GBV and sexual behaviors beyond age of sexual debut and number of partners. Again, only one adolescent-focused study assessed sexual behavior (Jewkes et al., 2006)

Partner sexual risk behavior was measured in two studies (Kacanek et al., 2013; Luo et al., 2008). A positive association between CSA (with contact) and partner infidelity was found in one study (Luo et al., 2008). Another study found a positive association between experiencing at least two forms of IPV and partner infidelity (Kacanek et al., 2013). Although we did not intend to capture partner sexual risk behavior, decided to include it where assessed because a partner's

risk behavior ultimately affects the SRH of adolescent girls and young women.

Sexual Empowerment

Only 12% (n = 2) of the studies assessed GBV and aspects of sexual empowerment processes (Luo et al., 2008; Caceres et al., 2000). Measures of sexual empowerment, were limited to sexual knowledge and refusing unwanted behavior Luo and colleagues (2008) found no significant associations between CSA and increased likelihood of having sex to please one's partner or having unwanted sex with one's partner among urban women. However, a positive association was found between CSA and being asked to perform an unwanted sex act (Luo et al., 2008). Caceres and colleagues (2000) found no significant relationship between experiencing coercion at sexual initiation and decreased sexual knowledge. None of the adolescent-focused studies assessed sexual empowerment outcomes.

Sexual Function

Eighteen percent (*n* = 3) assessed GBV and sexual function (Elnashar & Abdelhady, 2007; Luo et al., 2008; Megafu, 1983). Consistent, significant associations were found between experiencing FGMC and decreased pleasure (i.e., wife satisfaction) or orgasm/excited sex organs (i.e., lips, breast, clitoris) among women (Elnashar & Abdelhady, 2007; Megafu, 1983). Women who experienced contact-based CSA experienced sexual dysfunction (Luo et al., 2008). Elnashar and Abdelhady (2007) found that FGMC was associated with experiencing dyspareunia (painful sexual intercourse) and loss of libido. Although limited in the number of studies, the findings were consistent in demonstrating that GBV has a significant association with decreased sexual satisfaction among adolescent girls and young women in LMICs. Again, no adolescent-focused study assessed sexual function outcomes.

STIs

HIV was the most prevalent outcome studied, as almost half of the studies (41%, *n* = 7) examined associations between GBV exposure and HIV (Brewer et al., 2007; Jewkes et al., 2006; Kanki et al., 1992; Kiarie et al., 2006; Kouyoumdjian et al., 2013; Speizer et al., 2009). Through a univariate analysis, a history of FGMC was considered protective for HIV infection among female sex workers in two regions of Senegal; however, a multivariate analysis found history of FGMC as a confounder (Kanki et al., 1992). Using cross-sectional and longitudinal designs, Kouyoumdjian and colleagues (2013) found that the adjusted incidence rate ratio of HIV infection of women who had ever experienced IPV was significantly higher than that of women who had never experienced IPV. Moreover, no significant associations were found between sexual violence committed by a non-partner and HIV infection in two adolescent-focused studies (Jewkes et al., 2006; Speizer et al., 2009). However, Jewkes and colleagues (2006) did find a positive association between experiencing physical and sexual IPV and an HIV diagnosis (Jewkes et al., 2006). An adolescent-focused study did not find any significant association between FGMC and HIV (Brewer et al., 2007).

Eighteen percent (n = 3) of the studies assessed STIs other than HIV. Positive associations were found between CSA (Luo et al., 2008), two or more forms of IPV (Kiarie et al., 2006), and sexual violence (Caceres et al., 2000). Other STIs included any genito-urinary symptoms (e.g. genital sores, vaginal discharge of unusual color or odor, genital warts) per year or doctor diagnosis of syphilis gonorrhea, chlamydia, or trichomonas (Luo et al., 2008), symptoms or diagnosis of urethritis, genital ulcers, or vaginitis (Caceres et al., 2000), and history of STI (in general) (Kiarie et al., 2006).

DISCUSSION

This systematic review of reviews is the first comprehensive effort to synthesize the best

available data on the relationship between GBV and SRH outcomes among adolescent girls and young women in LMICs. Although the original aim of the study was to focus on adolescent girl and young women samples, reviews for this 10- to 24-year-old age group were generally lacking. Therefore, we expanded the inclusion criteria to allow studies with samples of adult women if these samples also included adolescent girls and young women.

The geographic scope of research was also quite limited with more than 50% of studies conducted within Africa. South America and Asia were represented scarcely in this sample. No studies were conducted in Eastern and Central Europe or the Middle East. FGMC is most prevalent in Africa (UNICEF, 2016b), which is evident in our small sample of studies. Finally, most studies were based on urban samples. Therefore, these results cannot be generalizable to other regions, as varying cultural contexts and norms can affect different SRH outcomes.

The study-level results demonstrated a consistent, positive correlation between exposure to GBV and adverse SRH outcomes, such as abortion, sexual dysfunction, STIs, and HIV. Moreover, exposure to GBV was negatively associated with sexual pleasure, as well as contraception use. However, fewer consistent links were found between GBV and gynecological and menstrual problems, pregnancy outcomes and complications, sexual behaviors, and sexual empowerment. The majority of the research has focused on FGMC in some LMICs. In addition, no reviews or studies assessed child marriage. In addition, none of the adolescent-only samples assessed gynecological problems, sexual function, menses, partner risk behavior, and empowerment.

A major take away is that most of the research focused on negative aspects of sexuality. This current study defined all sexual behavior neutrally, to avoid making judgment on what constitutes as "risky" sexual behavior. One study portrayed masturbation, thinking of sex, and

variety of sexual practices as constituting "hypersexuality" (Luo et al., 2008) when these behaviors are arguably positive sexual behaviors.

Most importantly, almost all the studies we reviewed utilized a cross-sectional design. Therefore, it is hard to draw temporal conclusions about the causal effects of GBV on SRH. For example, seeking abortion was related to experiencing GBV, although it was difficult to distinguish the causal direction. The multitude of cross-sectional studies makes it difficult to ascertain direction of causation. Without knowing the causal direction of the effects, it will be very challenging to design effective intervention programs.

Overall, a variety of methods were utilized, rendering it difficult to summarize and compare across studies. For example, in some studies, two or more sexual partners constituted risky sexual behavior, whereas in other studies, sexual behavior was deemed risky with three or more partners. Most of the studies utilized self-report measures and definitions of GBV experiences included temporal bounds ranging from per week to lifetime. Furthermore, very few studies utilized validated measurements to assess GBV and SRH outcomes. While this lack of standardized measurement makes it difficult to draw definite conclusions, it also provides an opportunity for further research to create validated instruments to measure the relationship between GBV and SRH. In addition, GBV exposures and SRH outcomes were defined and measured differently depending on the country and context. Future research needs to incorporate these differences in definition and conceptualization to better understand the relationship between GBV and SRH in specific regional contexts in order to better tailor intervention programs.

Limitations

Our review of reviews is not free from limitations. The search was employed between

January 1, 2000 and November 6, 2016, so it is possible that newer research was missed. In addition, due to our understanding that is limited to the English language, only English reviews and studies were included. Links between exposures and outcomes may exist in publications written in other languages. Moreover, we only extracted studies from the medium- and high-quality reviews rated by the AMSTAR criteria. A low-quality review may have contained high quality studies. Using the AMSTAR tool demonstrated that certain criteria for rating may be too detailed and can lead to useful reviews with low ratings. For example, none of the reviews met the criteria for including a statement on any conflicts of interest because the item specifies that both the included studies and the review itself needs to have stated conflicts of interest. In addition, medium- to high-quality rated reviews may not have included medium- or high-quality studies that have clear results.

Furthermore, only a sample was taken for the study-level data extraction included in this thesis. Therefore, the results may not be representative of all the studies that met inclusion criteria. Moreover, we only studied the GBV effects on adolescent girls and young women. Since adolescent boys and young men also experience GBV differently, they may have different SRH outcomes. Finally, results only yielded studies on heterosexual relationships, limiting our understanding of the ways GBV can affect other sexualities and SRH of sexual minorities.

CONCLUSION

This systematic review of reviews demonstrates that gaps in research on adolescent girls and young women in LMICs still exist. While data on the atrocities committed against women exists (Decker et al., 2014, WHO, 2005; WHO, 2013), the nuances of how GBV affects adolescent girls and their development is an area for further research. In particular, the realm of sexual empowerment and sexual function needs expansion, especially among adolescent girls

and young women in LMICs. It is troubling to see that none of the adolescent-focused studies assessed sexual empowerment of function, especially when adolescence is an important time of development and vulnerability. A recent review found that community mobilization and empowerment strategies were the most effective interventions to prevent FGMC (Salam et al., 2016). It will be important for global health professionals to take into consideration the differences between adult women and adolescent girls when developing SRH interventions. More supportive and accessible SRH services need to be tailored to girls in this age group, within the specific context of each region. By doing so we can move closer to the goal of ensuring universal access to SRH and rights for all women and girls.

Evidently, more positive aspects of sexuality require focus, especially for adolescent sexual health. From our data extraction, most associations for SRH outcomes were unclear except for sexual dysfunction, in which all studies, though few (n = 4), pointed to an association between GBV exposure and decreased sexual satisfaction and function. Gender needs to be talked about in regard to violence in order to achieve gender equality. Along with gender equality comes with the need to teach adolescent girls and young women about the positive aspects of sex, while building skills to negotiate sexual behaviors and the ability to refuse unwanted behaviors.

The findings from this review of reviews reveal how gender and adolescence must be integrated in research on GBV and SRH. Increases in education and access to SRH and rights bring limited improvements. Without understanding the specific context and underlying causes of GBV, interventions will not resolve SRH problems. In addition, longitudinal studies are needed to understand causal direction. Positive aspects of sexuality, such as sexual pleasure and empowerment should be addressed in research as well as in interventions. With evidence that

GBV is associated with the multifaceted aspects of SRH, it is prudent to use this information to improve girls' lives and overall well-being beyond adolescence. Policies and social structures need to address gender inequalities for girls and women to increase their power in reducing barriers to SRH and rights.

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

Table 1. Eligibility Criteria for the Inclusion or Exclusion of Reviews for this Systematic Review

Criterion	Included	Excluded
Type of review	 Original peer-reviewed reviews that could be assessed using AMSTAR criteria, whether or not authors explicitly stated the review was systematic. The review should have included some reference to quantitative associations between exposures and outcomes of interest. Peer and non-peer reviewed reviews identified through a search of the references lists of the included peer-reviewed reviews. Peer and non-peer reviewed reviews identified through consultation with corresponding authors of the included peer-reviewed reviews. Unpublished and peer-reviewed reviews found through grey literature search from organizational websites. 	 Peer-reviewed or non-peer reviewed reviews that included no reference to quantitative associations between exposures and outcomes of interest. Books, book chapters, conference proceedings, dissertation papers, editorials, reviews of reviews.
Exposure assessed	• Review addressed at least one of the following forms of gender-based violence (GBV) as an exposure or risk factor: child maltreatment, female-genital mutilation/cutting, child marriage, dating/intimate partner violence, sexual violence.	Review addressed none of these forms of gender-based violence as an exposure/risk factor.
Outcome assessed	 Review addressed at least one outcome or consequence of GBV assessed in adolescence or young adulthood. Outcomes were related to sexual and reproductive health: Family planning/contraception Sexually transmitted infections/diseases (STIs and STDs) Pregnancy Sexual risk behavior Sexual empowerment and relationship dynamics (intrapersonal and interpersonal) Sexual function Menstruation Review could have assessed GBV as a risk factor for one of the outcomes listed above. 	Review addressed none of these outcomes.
Study location	• Review included at least one study with a study sample from a low- or middle-income country (see Table X for a complete list of eligible countries).	Review included only studies from high income countries.

Study population	•	Review included at least one study with a study population of relevant age and gender, namely adolescent girls and young adult women ages 10-24 years.	•	Review did not include any study with a study population of relevant age and gender.
Language	•	Reviews published in the English language.	•	Reviews published in a non-English language.
Year	•	Reviews published between January 1, 2000 and November 6, 2016.	•	Reviews published prior to 2000.

Table 2. Search Strings and Search Results for PubMed, PsycINFO, and Scopus Searches

			Re	ferences Identifi	ied
	Search Step	Search String	PubMed	PsycINFO	Scopus
1	Gender- based violence	PubMed: ("violence" OR "spouse abuse" OR "domestic violence" OR "physical abuse" OR "intimate partner violence" OR "battered women" OR "rape" OR "sex offenses" OR "child abuse" or (whild abuse" or sexual" OR "circumcission, femal; MeSH Terms) OR ("Sexual Coercion" OR "Coepterion" OR "spousal violence" OR "psychological violence" OR "psychological abuse" OR "motional abuse" OR "marital aggression" OR "approximate of "marital violence" OR "psychological abuse" OR "marital abuse" OR "marital violence" OR "family conflict" OR "marital apuse" OR "possual rape" OR "Sexual assault" OR "compared on "sex offenses" OR "sexual assault" OR "sex offenses" OR "sexual assault" OR "sex offenses" OR "sex	80,210	131,060	102,958

		Abused" OR "Women, Battered" OR "Women, Abused" OR "Battered Woman" OR "Woman, Battered" OR "Abused Woman" OR "Abused Women" OR "Offense*, Sex" OR "Sexual Violence*" OR "Violence*, Sexual" OR "Sexual Abuse*" OR "Abuse*, Sexual" OR "Abuse, Child" OR "Child Mistreatment" OR "Mistreatment, Child" OR "Child Maltreatment" OR "Maltreatment, Child" OR "Child Neglect" OR "Neglect, Child" OR "Sexual Child Abuse" OR "Molestation, Sexual, Child" OR "Child Molestation, Sexual Child Nolestation, Sexual Child Nolestation, Sexual Child OR "Child Sexual" OR "Molestation, Sexual Child" OR "Circumcisions, Female" OR "Female Circumcision*" OR "Infibulation*" OR "Clitoridectom*" OR "Clitoridectom*" OR "Genital Mutilation, Female" PubMed: ("Pregnancy" OR "Pregnant Women" OR "Pregnancy, Unwanted" OR "Pregnancy, Unplanned" OR "Pregnancy, High-Risk" OR "Pregnancy in Adolescence" OR "Pregnancy Complications" OR "Libido" OR "Orgasm" OR "Sexual Dysfunction, Physiological" OR "Sexual Dysfunctions, Psychological" OR "Pelvic Pain" OR "Vaginismus" OR "Unsafe Sex" OR "Sexual Partners"			
2	Sexual and reproductive health	OR "Coitus" OR "Menarche" OR "Menstruation Disturbances" OR "Dysmenorrhea" OR "Menstrual Cycle" OR "Menstruation" OR "Puberty, Precocious" OR "Premenstrual Syndrome" OR "Premenstrual Dysphoric Disorder" OR "Scaulally Transmitted Diseases" OR "HIV" OR "Acquired Immunodeficiency Syndrome" OR "Vaginal Fistula" OR "Chlamydia" OR "Gonorrhea" OR "Syphilis" OR "Trichomonas Vaginitis" OR "Herpes Genitalis" OR "Condylomata Acuminata" OR "Birth Intervals" OR "Levonorgestrel" OR "Contraceptive Devices, Female" OR "Intrauterine Devices" OR "Contraception" OR "Contraception, Postcoial" OR "Contraceptives, Oral" OR "Abortion, Therapeutic" [MeSH Terms]) OR ("Accidental Pregnancies" OR "Abortion, Induced" OR "Abortion, Threatened" OR "Abortion, Therapeutic" [MeSH Terms]) OR ("Accidental Pregnancies" OR "Accidental Pregnancy" OR "Cuniteneded Pregnancies" OR "At Risk Pregnancy" OR "Cuniteneded Pregnancies" OR "At Risk Pregnancy" OR "Chlid Pregnancies" OR "At Regnancy" OR "At Risk Pregnancy" OR "Sexual Extraordy OR "Sexual Devices" OR "At Risk Pregnancy" OR "S	1,713,197	708,045	3,217,179

Fertility Control" OR "Fertility Control, Involuntary" OR "Contraceptive Coercion" OR "Condom Negotiation" OR "Oral Contraceptive, Phasic" OR "Contraceptive, Phasic Oral" OR "Phasic Oral Contraceptive" OR "Oral Contraceptive, Low-Dose" OR "Contraceptive, Low-Dose Oral" OR "Low-Dose Contraceptive" OR "Internal Condom" OR "Termination" OR "Long-acting Reversible Contraceptive" OR "Long Acting Reversible Contraceptive" OR "IUD" OR "IUD" OR "IUD" OR "IUD" OR "IUD", OR "IUD" OR "IUD", OR "IUD", OR "IUD", OR "IUD", OR "IUD", OR "Abstinence" OR "Abstinent" OR "Sexually Abstinent" OR "Sex Abstinence" OR "Vaginal Diaphragms" OR "Fertility Enhancement" OR "Abstity" OR "Abortions, Therapeutic" OR "Abortions, Drug Induced" OR "Abortions, Saline Solution" OR "Abortions, Soap Solution" OR "Contraceptive Use-Effectiveness" OR "Contraceptive Use Effectiveness" OR "Use-Effectiveness" [All Fields])

PsycINFO: "Pregnanc*" OR "Pregnant Wom*n" OR "Pregnanc*, Unwanted" OR "Pregnanc*, Unplanned" OR "Accidental Pregnanc*" OR "Unintended Pregnanc*" OR "Unintended Pregnanc*" OR "At Risk Pregnanc*" OR "At Risk Pregnanc*" OR "At-Risk Pregnanc*" OR "Child Pregnanc*" OR "Initiated Childbearing" OR "Initiating Childbearing" OR "Pregnancy-related Stress" OR "Pregnancy Related Stress" OR "Gestation" OR "Wom*n, Pregnant" OR "Unwanted Pregnanc*" OR "Unplanned Pregnanc*" OR "High-Risk Pregnanc*" OR "High Risk Pregnanc*" OR "Adolescence, Pregnanc* in" OR "Teen Pregnanc*" OR "Adolescent Pregnanc*" OR "Pregnanc*, Adolescent" OR "Pregnanc*, Teenage" OR "Teenage Pregnanc*" OR "Preteen Pregnanc*" OR "Pregnanc*, Preteen" OR "Complication*, Pregnancy" OR "Pregnancy Complication*" OR "Libido" OR "Orgasm*" OR "Sexual Dysfunction*, Physiological" OR "Sexual Dysfunction*, Psychological" OR "Pelvic Pain*" OR "Vaginismus" OR "Arousal" OR "Sexual Arousal" OR "Female Orgasm*" OR "Sexual Function Disturbance*" OR "Female Sexual Dysfunction*" OR "Inhibited Sexual Desire" OR "Sex Drive" OR "Desire" OR "Sexual Desire" OR "Lubricant" OR "Lubrication" OR "Female Sexual Interest" OR "Sexual Interest" OR "Healthy Sexual Functioning" OR "Sexual Function" OR "Sexual Functioning" OR "Decreased Libido" OR "Libido, Decreased" OR "Increased Libido" OR "Libido, Increased" OR "Sexual Satisfaction*" OR "Satisfaction*, Sexual" OR "Sexual Gratification*" OR "Gratification*, Sexual" OR "Physiological Sexual Dysfunction*" OR "Sexual Disorder*, Physiological" OR "Sex Disorder*" OR "Physiological Sexual Disorder*" OR "Dysfunction*, Psychological Sexual" OR "Psychological Sexual Dysfunction*" OR "Psychosexual Dysfunction*" OR "Dysfunction*, Psychosexual" OR "Psychosexual Disorder*, OR "Disorder*, Psychosexual" OR "Hypoactive Sexual Desire Disorder" OR "Sexual Aversion Disorder* OR "Aversion Disorder*. Sexual" OR "Disorder*, Sexual Aversion" OR "Orgasmic Disorder*" OR "Disorder*, Orgasmic" OR "Sexual Arousal Disorder*" OR "Arousal Disorder*, Sexual "OR "Disorder*, Sexual Arousal" OR "Frigidity" OR "Pain*, Pelvic" OR "Unsafe Sex" OR "Sexual Partner*" OR "Coitus" OR "Sexual Behavior" OR "Sex Behavior" OR "Risky Sexual Behavior" OR "Sexual Risk Behavior" OR "Risky Sex" OR "Sexual Risk-taking" OR "Sexual Risk Taking" OR "Hypersexuality" OR "Promiscuity" OR "Promiscuous" OR "Prostitution" OR "Commercial Sex" OR "Transactional Sex" OR "Sex Exchange*" OR "Sexual Exchange*" OR "Sex Work" OR "Sex Worker*" OR "Early Sexual Debut" OR "Age of Initiation" OR "Early Sexual Activit*" OR "Early Adolescent Sexual Initiation" OR "Forced First Sex" OR "Forced Sexual Debut" OR "Premarital Sex" OR "Premarital Sex Behavior*" OR "Premarital Intercourse" OR "Behavior*, Premarital Sex" OR "Oral Sex" OR "Sex, Oral" OR "Anal Sex" OR "Sex, Anal" OR "Anal Intercourse" OR "Vaginal Intercourse" OR "Vaginal Sex" OR "Sex, Unsafe" OR "Unprotected Sex" OR "Sex, Unprotected" OR "High-Risk Sex" OR "High Risk Sex" OR "Sex, High-Risk" OR "Partner*, Sexual" OR "Multiple Partner*" OR "Partner*, Multiple" OR "Sexual Intercourse" OR "Intercourse, Sexual" OR "First Intercourse*," OR "Intercourse*, First" OR "Coital Frequenc*, OR "Frequenc*, Coital" OR "Menarche" OR "Menstruation Disturbance*" OR "Dysmenorrhea*" OR "Menstrual Cycle*" OR "Menstruation*" OR "Puberty, Precocious" OR "Premenstrual Syndrome*" OR "Premenstrual Dysphoric Disorder*" OR "Early Menarche" OR "Period" OR "Menses" OR "Abnormal Menstrual Cycle*" OR "Abnormal Period*" OR "Abnormal Menstruation" OR "Menstrual Shame" OR "Menstrual Disorder*" OR "PMS" OR "PMDD" OR "PDS" OR "Cramp*" OR "Disturbance*, Menstruation" OR "Menstruation Disorder*, OR "Disorder*, Menstruation" OR "Menstruation*, Retrograde" OR "Retrograde Menstruation*, OR "Polymenorrhea*, OR "Hypomenorrhea*, OR "Hypomen "Pain*, Menstrual" OR "Menstrual Pain*" OR "Menstruation*, Painful" OR "Painful Menstruation*" OR "Cycle*, Menstrual" OR "Endometrial Cycle*" OR "Cycle*, Endometrial" OR "Ovarian Cycle*" OR "Cycle*, Ovarian" OR "Precocious Puberty" OR "Syndrome*, Premenstrual" OR "Premenstrual Tension*" OR "Tension*, Premenstrual" OR "Disorder*, Premenstrual Dysphoric" OR "Dysphoric Disorder*, Premenstrual" OR "Premenstrual Dysphoric Syndrome*" OR "Syndrome*, Premenstrual Dysphoric" OR "Relationship Satisfaction" OR "Marital Satisfaction" OR "Psychosexual Development" OR "Sexual Empowerment" OR "Sexual Self Efficacy" OR "Sexual Self-Efficacy" OR "Sexual Efficacy" OR "Sexual Identity Development" OR "Contraceptive Self-Efficacy" OR "Contraceptive Self Efficacy" OR "Body Image" OR "Genital Self-Image" OR "Genital Self Image" OR "Body Shame" OR "Body Satisfaction" OR "Body Dissatisfaction" OR "Sexual Shame" OR "Sexual Embarrassment" OR "Sexual Self-Concept" OR "Sexual

Self-Schema" OR "Sexual Subject" OR "Sexual Subjectivity" OR "Self-Objectification" OR "Self-Objectification" OR "Sexual Self" OR "Sexual Knowledge" OR "Relationship Dynamic" OR "Relationship Dynamics" OR "Sexual Autonomy" OR "Ability to Consent" OR "Consent" OR "Consenting" OR "Refusal of Unwanted Behavior" OR "Sexual Refusal" OR "Sexual Communication" OR "Sexual Communicating" OR "Sexual Decision-Making" OR "Sexual Decision Making" OR "Sexual Negotiation" OR "Sexual Relationship Power" OR "Initiation of Wanted Sex" OR "Sexual Assertiveness" OR "Sexually Assertive" OR "Initiating Sex" OR "Reproductive Choice*" OR "Sexually Transmitted Disease*" OR "HIV" OR "Acquired Immunodeficiency Syndrome*" OR "Vaginal Fistula*" OR "Chlamydia" OR "Gonorrhea" OR "Syphilis" OR "Trichomonas Vaginitis" OR "Herpes Genitalis" OR "Condylomata Acuminata" OR "Sexual Disease*" OR "Sexual Symptom*" OR "STD*" OR "Human Papillomavirus" OR "HPV" OR "Disease*, Sexually Transmitted" OR "STI*" OR "Venereal Disease*" OR "Disease*, Venereal" OR "Sexually Transmitted Infection*, OR "Infection*, Sexually Transmitted" OR "Transmitted Infection*, Sexually" OR "Human Immunodeficiency Virus*" OR "Immunodeficiency Virus*, Human" OR "Virus*, Human Immunodeficiency" OR "Human T Cell Lymphotropic Virus Type III" OR "Human T-Cell Lymphotropic Virus Type III" OR "Human T-Cell Leukemia Virus Type III" OR "Human T Cell Leukemia Virus Type III" OR "LAV-HTLV-III" OR "Lymphadenopathy-Associated Virus*" OR "Lymphadenopathy Associated Virus*, Lymphadenopathy-Associated" OR "Human T Lymphotropic Virus Type III" OR "Human T-Lymphotropic Virus Type III" OR "AIDS Virus*" OR "Virus*, AIDS" OR "Acquired Immune Deficiency Syndrome Virus" OR "Acquired Immunodeficiency Syndrome Virus" OR "HTLV-III" OR "Immunologic Deficiency Syndrome*, Acquired" OR "Acquired Immune Deficiency Syndrome*" OR "Acquired Immuno-Deficiency Syndrome*" OR "Acquired Immuno Deficiency Syndrome*" OR "Immuno-Deficiency Syndrome*, Acquired" OR "Syndrome*, Acquired Immuno-Deficiency" OR "Immunodeficiency Syndrome*, Acquired" OR "Syndrome*, Acquired Immunodeficiency" OR "AIDS" OR "Fistula*, Vaginal" OR "Great Pox" OR "Pox, Great" OR "Trichomonas Vaginitides" OR "Vaginitides, Trichomonas" OR "Vaginitis, Trichomonas" OR "Genital Herpes" OR "Herpes, Genital" OR "Herpes Simplex Virus Genital Infection" OR "Herpes Simplex, Genital" OR "Genital Herpes Simplex" OR "Venereal Wart*" OR "Wart*, Venereal" OR "Genital Wart*" OR "Wart*, Genital" OR "Birth Interval*" OR "Levonorgestrel" OR "Contraceptive Device*, Female" OR "Intrauterine Device*" OR "Contraception" OR "Contraception, Postcoital" OR "Contraceptive*, Oral" OR "Sexual Abstinence" OR "Safe Sex" OR "Condom*" OR "Condom*, Female" OR "Abortion*, Induced" OR "Abortion*, Threatened" OR "Abortion*, Therapeutic" OR "Family Planning" OR "Contraceptive*" OR "Fertility Regulation*" OR "Condom Negotiation" OR "Internal Condom" OR "Termination" OR "Long-acting Reversible Contraception" OR "Long Acting Reversible Contraception" OR "Long-acting Reversible Contraception" OR "L acting Reversible Contraceptive" OR "Long Acting Reversible Contraceptive" OR "IUD*" OR "LARC" OR "Birth Control Implant" OR "Abstinen*" OR "Sexually Abstinent" OR "Sex Abstinence" OR "Fertility Enhancement" OR "Assisted Fertility" OR "Contraceptive Use-Effectiveness" OR "Contraceptive Use Effectiveness" OR "Contraceptive Effectiveness" OR "Use Effectiveness" OR "Use-Effectiveness" OR "Involuntary Fertility Control" OR "Fertility Control, Involuntary" OR "Contraceptive Coercion" OR "Birth Spacing*" OR "Pregnancy Interval*" OR "First Birth Interval" OR "D-Norgestrel" OR "D Norgestrel" OR "I-Norgestrel" OR "I Norgestrel" OR "Cerazet" OR "Alcala Brand of Levonorgestrel" OR "Levonorgestrel Alcala Brand" OR "duofem" OR "Hexal Brand of Levonorgestrel" OR "Levonorgestrel Hexal Brand" OR "Microlut" OR "Schering Brand 2 of Levonorgestrel" OR "Mirena" OR "Schering Brand 1 of Levonorgestrel" OR "Berlex Brand of Levonorgestrel" OR "Levonorgestrel Berlex Brand" OR "NorLevo" OR "HRA Brand 1 of Levonorgestrel" OR "Norplant" OR "Wyeth Brand of Levonorgestrel" OR "Levonorgestrel Wyeth Brand" OR "Norplant-2" OR "Norplant 2" OR "Norplant2" OR "Aventis Pharma Brand of Levonorgestrel" OR "Microval" OR "Plan B" OR "Women's Capital Brand of Levonorgestrel" OR "Paladin Brand of Levonorgestrel" OR "Levonorgestrel Paladin Brand" OR "Vikela" OR "HRA Brand 2 of Levonorgestrel" OR "Capronor" OR "Norgeston" OR "Schering Brand 3 of Levonorgestrel" OR "Device*, Female Contraceptive" OR "Female Contraceptive Device*" OR "Coiled Spring*" OR "Spring*, Coiled" OR "Vaginal Sponge*" OR "Sponge*, Vaginal" OR "Ring*, Vaginal" OR "Vaginal Ring*" OR "Vaginal Shield*" OR "Shield*, Vaginal" OR "Cervical Cap*" OR "Cap*, Cervical" OR "Vaginal Diaphragm*" OR "Diaphragm*, Vaginal" OR "Device*, Intrauterine" OR "Contraceptive IUD*" OR "IUD*, Contraceptive" OR "Contraceptive Device*, Intrauterine" OR "Device*, Intrauterine Contraceptive" OR "Intrauterine Contraceptive Device*" OR "Unmedicated IUD*" OR "IUD*. Unmedicated" OR "Inhibition of Fertilization" OR "Fertilization Inhibition" OR "Fertility Control" OR "Birth Control" OR "Contraceptive Method*" OR "Female Contraception*" OR "Contraception*, Female" OR "Male Contraception*" OR "Contraception*, Male" OR "Postcoital Contraception" OR "Fertility Control, Postcoital" OR "Control, Postcoital Fertility" OR "Postcoital Fertility Control" OR "Emergency Contraception" OR "Contraception, Emergency" OR "Oral Contraceptive*" OR "Oral Contraceptive*, Phasic "OR "Contraceptive*, Phasic Oral" OR "Phasic Oral Contraceptive*" OR "Oral Contraceptive*, Low-Dose" OR "Contraceptive*, Low-Dose Oral" OR "Low-Dose Oral Contraceptive*" OR "Oral Contraceptive*, Low Dose" OR "Abstinence, Sexual" OR "Celibacy" OR "Virginity" OR "Postpartum Abstinence" OR "Abstinence, Postpartum" OR "Sex, Safe" OR "Protected Sex" OR "Sex, Protected" OR "Responsible Sex" OR "Sex,

Responsible" OR "Condom Manufacture" OR "Manufacture, Condom" OR "Female Condom*" OR "Female, Condom*" OR "Induced Abortion*" OR "Abortion* (Induced)" OR "Abortion Rate*" OR "Rate*, Abortion" OR "Abortion Technique*" OR "Technique*, Abortion" OR "Abortion Technic*" OR "Technic*, Abortion" OR "Abortion*, Drug-Induced" OR "Abortion*, Drug Induced" OR "Drug-Induced Abortion*" OR "Previous Abortion*" OR "Abortion*, Previous" OR "Abortion Histor*" OR "Histor*, Abortion" OR "Abortion*, Saline-Solution" OR "Abortion*, Saline Solution" OR "Saline-Solution Abortion*" OR "Abortion*, Soap-Solution" OR "Abortion, Soap Solution" OR "Soap-Solution Abortion*" OR "Anti Abortion Groups" OR "Anti-Abortion Group*" OR "Group*, Anti-Abortion" OR "Embryotomy" OR "Embryotomies" OR "Fertility Control. Postconception" OR "Postconception Fertility Control" OR "Abortion Failure*" OR "Failure*, Abortion" OR "Abortion*, Rivanol" OR "Rivanol Abortion*" OR "Threatened Abortion*" Scopus: "Pregnanc*" OR "Pregnant Wom*n" OR "Pregnanc*, Unwanted" OR "Pregnanc*, Unplanned" OR "Accidental Pregnanc*" OR "Unintended Pregnanc*" OR "Unintentional Pregnanc*" OR "Risky Pregnanc*" OR "At Risk Pregnanc*" OR "At-Risk Pregnanc*" OR "Child Pregnanc*" OR "Initiated Childbearing" OR "Initiating Childbearing" OR "Pregnancy-related Stress" OR "Pregnancy Related Stress" OR "Gestation" OR "Wom*n, Pregnant" OR "Unwanted Pregnanc*" OR "Unplanned Pregnanc*" OR "High-Risk Pregnanc*" OR "High Risk Pregnanc*" OR "Adolescence, Pregnanc* in" OR "Teen Pregnanc*" OR "Adolescent Pregnanc*" OR "Pregnanc*, Adolescent" OR "Pregnanc*, Teenage" OR "Teenage Pregnanc*" OR "Preteen Pregnanc*" OR "Pregnanc*, Preteen" OR "Complication*, Pregnancy" OR "Pregnancy Complication*" OR "Libido" OR "Orgasm*" OR "Sexual Dysfunction*, Physiological" OR "Sexual Dysfunction*, Psychological" OR "Pelvic Pain*" OR "Vaginismus" OR "Arousal" OR "Sexual Arousal" OR "Female Orgasm*" OR "Sexual Function Disturbance*" OR "Female Sexual Dysfunction*" OR "Inhibited Sexual Desire" OR "Sex Drive" OR "Desire" OR "Sexual Desire" OR "Lubricant" OR "Lubrication" OR "Female Sexual Interest" OR "Sexual Interest" OR "Healthy Sexual Functioning" OR "Sexual Function" OR "Sexual Functioning" OR "Decreased Libido" OR "Libido, Decreased" OR "Increased Libido" OR "Libido, Increased" OR "Sexual Satisfaction*" OR "Satisfaction*, Sexual" OR "Sexual Gratification*" OR "Gratification*, Sexual" OR "Physiological Sexual Dysfunction*" OR "Sexual Disorder*, Physiological" OR "Sex Disorder*" OR "Physiological Sexual Disorder*" OR "Dysfunction*, Psychological Sexual" OR "Psychological Sexual" Dysfunction*" OR "Psychosexual Dysfunction*" OR "Dysfunction*, Psychosexual" OR "Psychosexual Disorder*, OR "Disorder*, Psychosexual" OR "Hypoactive Sexual Desire Disorder" OR "Sexual Aversion Disorder*" OR "Aversion Disorder*. Sexual" OR "Disorder*, Sexual Aversion" OR "Orgasmic Disorder*" OR "Disorder*, Orgasmic" OR "Sexual Arousal Disorder*" OR "Arousal Disorder*, Sexual OR "Disorder*, Sexual Arousal" OR "Frigidity" OR "Pain*, Pelvic" OR "Unsafe Sex" OR "Sexual Partner*" OR "Coitus" OR "Sexual Behavior" OR "Sex Behavior" OR "Risky Sexual Behavior" OR "Sexual Risk Behavior" OR "Risky Sex" OR "Sexual Risk-taking" OR "Sexual Risk Taking" OR "Hypersexuality" OR "Promiscuity" OR "Promiscuous" OR "Prostitution" OR "Commercial Sex" OR "Transactional Sex" OR "Sex Exchange*" OR "Sexual Exchange*" OR "Sex Work" OR "Sex Worker*" OR "Early Sexual Debut" OR "Age of Initiation" OR "Early Sexual Activit*" OR "Early Adolescent Sexual Initiation" OR "Forced First Sex" OR "Forced Sexual Debut" OR "Premarital Sex" OR "Premarital Sex Behavior*" OR "Premarital Intercourse" OR "Behavior*, Premarital Sex" OR "Oral Sex" OR "Sex, Oral" OR "Anal Sex" OR "Sex, Anal" OR "Anal Intercourse" OR "Vaginal Intercourse" OR "Vaginal Sex" OR "Sex, Unsafe" OR "Unprotected Sex" OR "Sex, Unprotected" OR "High-Risk Sex" OR "High Risk Sex" OR "Sex, High-Risk" OR "Partner*. Sexual" OR "Multiple Partner*" OR "Partner*. Multiple" OR "Sexual Intercourse" OR "Intercourse. Sexual" OR "First Intercourse*, First" OR "Coital Frequenc*, OR "Frequenc*, Coital" OR "Menarche" OR "Menstruation Disturbance*" OR "Dysmenorrhea*" OR "Menstrual Cycle*" OR "Menstruation*" OR "Puberty, Precocious" OR "Premenstrual Syndrome*" OR "Premenstrual Dysphoric Disorder*" OR "Early Menarche" OR "Period" OR "Menses" OR "Abnormal Menstrual Cycle*" OR "Abnormal Period*" OR "Abnormal Menstruation" OR "Menstrual Shame" OR "Menstrual Disorder*" OR "PMS" OR "PMDD" OR "PDS" OR "Cramp*" OR "Disturbance*, Menstruation" OR "Menstruation Disorder*" OR "Disorder*, Menstruation" OR "Menstruation*, Retrograde" OR "Retrograde Menstruation*" OR "Polymenorrhea*" OR "Hypomenorrhea*" OR "Pain*, Menstrual" OR "Menstrual Pain*" OR "Menstruation*, Painful" OR "Painful Menstruation*" OR "Cycle*, Menstrual" OR "Endometrial Cycle*" OR "Cycle*. Endometrial" OR "Ovarian Cycle*" OR "Cycle*. Ovarian" OR "Precocious Puberty" OR "Syndrome*, Premenstrual" OR "Premenstrual Tension*" OR "Tension*, Premenstrual" OR "Disorder*, Premenstrual Dysphoric" OR "Dysphoric Disorder*, Premenstrual" OR "Premenstrual Dysphoric Syndrome*" OR "Syndrome*, Premenstrual Dysphoric" OR "Relationship Satisfaction" OR "Marital Satisfaction" OR "Psychosexual Development" OR "Sexual Empowerment" OR "Sexual Self Efficacy" OR "Sexual Self-Efficacy" OR "Sexual Efficacy" OR "Sexual Identity Development" OR "Contraceptive Self-Efficacy" OR "Contraceptive Self Efficacy" OR "Body Image" OR "Genital Self-Image" OR "Genital Self Image" OR "Body Shame" OR "Body Satisfaction" OR "Body Dissatisfaction" OR "Sexual Shame" OR "Sexual Embarrassment" OR "Sexual Self-Concept" OR "Sexual Self-Schema" OR "Sexual Subject" OR "Sexual Subjectivity" OR "Self-Objectification" OR "Self Objectification" OR "Sexual Self" OR "Sexual Knowledge" OR "Relationship Dynamic" OR "Relationship Dynamics" OR "Sexual Autonomy" OR "Ability to Consent"

OR "Consent" OR "Consenting" OR "Refusal of Unwanted Behavior" OR "Sexual Refusal" OR "Sexual Communication" OR "Sexual Communicating" OR "Sexual Decision-Making" OR "Sexual Decision Making" OR "Sexual Negotiation" OR "Sexual Relationship Power" OR "Initiation of Wanted Sex" OR "Sexual Assertiveness" OR "Sexually Assertive" OR "Initiating Sex" OR "Reproductive Choice*" OR "Sexually Transmitted Disease*" OR "HIV" OR "Acquired Immunodeficiency Syndrome*" OR "Vaginal Fistula*" OR "Chlamydia" OR "Gonorrhea" OR "Syphilis" OR "Trichomonas Vaginitis" OR "Herpes Genitalis" OR "Condylomata Acuminata" OR "Sexual Disease*" OR "Sexual Symptom*" OR "STD*" OR "Human Papillomavirus" OR "HPV" OR "Disease*, Sexually Transmitted" OR "STI*" OR "Venereal Disease*" OR "Disease*, Venereal" OR "Sexually Transmitted Infection*" OR "Infection*. Sexually Transmitted" OR "Transmitted Infection*, Sexually" OR "Human Immunodeficiency Virus*" OR "Immunodeficiency Virus*, Human" OR "Virus*, Human Immunodeficiency" OR "Human T Cell Lymphotropic Virus Type III" OR "Human T-Cell Lymphotropic Virus Type III" OR "Human T-Cell Leukemia Virus Type III" OR "Human T Cell Leukemia Virus Type III" OR "LAV-HTLV-III" OR "Lymphadenopathy-Associated Virus*" OR "Lymphadenopathy Associated Virus*" OR "Virus*. Lymphadenopathy-Associated" OR "Human T Lymphotropic Virus Type III" OR "Human T-Lymphotropic Virus Type III" OR "AIDS Virus*" OR "Virus*, AIDS" OR "Acquired Immune Deficiency Syndrome Virus" OR "Acquired Immunodeficiency Syndrome Virus" OR "HTLV-III" OR "Immunologic Deficiency Syndrome*, Acquired Immune Deficiency Syndrome*" OR "Acquired Immuno-Deficiency Syndrome*" OR "Acquired Immuno Deficiency Syndrome*" OR "Immuno-Deficiency Syndrome*, Acquired" OR "Syndrome*, Acquired Immuno-Deficiency" OR "Immunodeficiency Syndrome*, Acquired" OR "Syndrome*, Acquired Immunodeficiency" OR "AIDS" OR "Fistula*, Vaginal" OR "Great Pox" OR "Pox, Great" OR "Trichomonas Vaginitides" OR "Vaginitides, Trichomonas" OR "Vaginitis, Trichomonas" OR "Genital Herpes" OR "Herpes, Genital" OR "Herpes Simplex Virus Genital Infection" OR "Herpes Simplex, Genital" OR "Genital Herpes Simplex" OR "Venereal Wart*" OR "Wart*, Venereal" OR "Genital Wart*" OR "Wart*, Genital" OR "Birth Interval*" OR "Levonorgestrel" OR "Contraceptive Device*, Female" OR "Intrauterine Device*" OR "Contraception" OR "Contraception, Postcoital" OR "Contraceptive*, Oral" OR "Sexual Abstinence" OR "Safe Sex" OR "Condom*" OR "Condom*, Female" OR "Abortion*, Induced" OR "Abortion*, Threatened" OR "Abortion*, Therapeutic" OR "Family Planning" OR "Contraceptive*" OR "Fertility Regulation*" OR "Condom Negotiation" OR "Internal Condom" OR "Termination" OR "Long-acting Reversible Contraception" OR "Long Acting Reversible Contraception" OR "Long-acting Reversible Contraception" OR "L acting Reversible Contraceptive" OR "Long Acting Reversible Contraceptive" OR "IUD*" OR "LARC" OR "Birth Control Implant" OR "Abstinen*" OR "Sexually Abstinent" OR "Sex Abstinence" OR "Fertility Enhancement" OR "Assisted Fertility" OR "Contraceptive Use-Effectiveness" OR "Contraceptive Use Effectiveness" OR "Contraceptive Effectiveness" OR "Use Effectiveness" OR "Use-Effectiveness" OR "Involuntary Fertility Control" OR "Fertility Control, Involuntary" OR "Contraceptive Coercion" OR "Birth Spacing*" OR "Pregnancy Interval*" OR "First Birth Interval" OR "D-Norgestrel" OR "D Norgestrel" OR "I-Norgestrel" OR "I Norgestrel" OR "Cerazet" OR "Alcala Brand of Levonorgestrel" OR "Levonorgestrel Alcala Brand" OR "duofem" OR "Hexal Brand of Levonorgestrel" OR "Levonorgestrel Hexal Brand" OR "Microlut" OR "Schering Brand 2 of Levonorgestrel" OR "Mirena" OR "Schering Brand 1 of Levonorgestrel" OR "Berlex Brand of Levonorgestrel" OR "Levonorgestrel Berlex Brand" OR "NorLevo" OR "HRA Brand 1 of Levonorgestrel" OR "Norplant" OR "Wyeth Brand of Levonorgestrel" OR "Levonorgestrel Wyeth Brand" OR "Norplant-2" OR "Norplant 2" OR "Norplant2" OR "Aventis Pharma Brand of Levonorgestrel" OR "Microval" OR "Plan B" OR "Women's Capital Brand of Levonorgestrel" OR "Paladin Brand of Levonorgestrel" OR "Levonorgestrel Paladin Brand" OR "Vikela" OR "HRA Brand 2 of Levonorgestrel" OR "Capronor" OR "Norgeston" OR "Schering Brand 3 of Levonorgestrel" OR "Device*, Female Contraceptive" OR "Female Contraceptive Device*" OR "Coiled Spring*" OR "Spring*, Coiled" OR "Vaginal Sponge*" OR "Sponge*, Vaginal" OR "Ring*, Vaginal" OR "Vaginal Ring*" OR "Vaginal Shield*" OR "Shield*, Vaginal" OR "Cervical Cap*" OR "Cap*, Cervical" OR "Vaginal Diaphragm*" OR "Diaphragm*, Vaginal" OR "Device*, Intrauterine" OR "Contraceptive IUD*" OR "IUD*, Contraceptive" OR "Contraceptive Device*, Intrauterine" OR "Device*, Intrauterine Contraceptive" OR "Intrauterine Contraceptive Device*" OR "Unmedicated IUD*" OR "IUD*, Unmedicated" OR "Inhibition of Fertilization" OR "Fertilization Inhibition" OR "Fertility Control" OR "Birth Control" OR "Contraceptive Method*" OR "Female Contraception*" OR "Contraception*, Female" OR "Male Contraception*" OR "Contraception*, Male" OR "Postcoital Contraception" OR "Fertility Control, Postcoital" OR "Control, Postcoital Fertility" OR "Postcoital Fertility Control" OR "Emergency Contraception" OR "Contraception, Emergency" OR "Oral Contraceptive*" OR "Oral Contraceptive*, Phasic" OR "Contraceptive*, Phasic Oral" OR "Phasic Oral Contraceptive*" OR "Oral Contraceptive*, Low-Dose" OR "Contraceptive*, Low-Dose Oral" OR "Low-Dose Oral Contraceptive*" OR "Oral Contraceptive*, Low Dose" OR "Abstinence, Sexual" OR "Celibacy" OR "Virginity" OR "Postpartum Abstinence" OR "Abstinence, Postpartum" OR "Sex, Safe" OR "Protected Sex" OR "Sex, Protected" OR "Responsible Sex" OR "Sex, Responsible" OR "Condom Manufacture" OR "Manufacture, Condom" OR "Female Condom*" OR "Female, Condom*" OR "Induced Abortion*" OR "Abortion* (Induced)" OR "Abortion Rate*" OR "Rate*, Abortion" OR "Abortion Technique*" OR "Technique*.

		Abortion" OR "Abortion Technic*" OR "Technic*, Abortion" OR "Abortion*, Drug-Induced" OR "Drug-Induced Abortion*" OR "Previous Abortion*" OR "Abortion*, Previous" OR "Abortion Histor*" OR "Histor*, Abortion" OR "Abortion*, Saline-Solution" OR "Abortion*, Saline-Solution" OR "Abortion*, Soap-Solution" OR "Abortion*, Soap-Solution" OR "Abortion, Soap Solution" OR "Soap-Solution Abortion*" OR "Anti-Abortion Groups" OR "Anti-Abortion Groups" OR "Group*, Anti-Abortion" OR "Embryotomy" OR "Embryotomies" OR "Fertility Control, Postconception" OR "Postconception Fertility Control" OR "Abortion Failure*, Abortion" OR "Abortion*, Rivanol" OR "Rivanol Abortion*" OR "Threatened Abortion*"			
3	GBV and SRH	1 & 2	25,782	30,253	34,273
4	Female only	PubMed: Female[MeSH Terms]; PsycINFO: Female; Scopus: Keyword = Female	18,717	14,786	24,023
		PubMed: child[MeSH] OR adolescent[MeSH]) OR young adult[MeSH]			
5	Ages 0-24	PsycINFO: Narrow by Subject Age: childhood (birth-12 yrs), adolescence (13-17 yrs), young adulthood (18-29 yrs)	12,339	518	14,047
		Scopus: Keyword: child, adolescent, young adult			
6	Since 2000	PubMed: "2000/01/01"[PDat] : "2016/12/31"[PDat]; PyscINFO: Limiters - Publication Year: 2000-2016; Scopus: 2000-2016	9,027	466	10,384
7	Reviews	PubMed: ("meta-analysis" [Publication Type] OR "meta-analysis" [All Fields] OR meta-review [All Fields] OR "review" [Publication Type] OR "systematic review" [All Fields] OR "review" [Publication Type] OR "review" [All Fields] OR systematic[sb]) PsycINFO: narrow by methodology "meta analysis" "systematic review" Scopus: document type: Review, AND "meta-analysis" OR "systematic review"	913	1	56
8	Low- or Middle- Income Country	PubMed: ("Developing countries" [MeSH Terms]) OR ("developing population" OR "developing populations" OR "less developed populations" OR "less developed world" OR "lesser developed country" OR "lesser developed population" OR "lesser developed attions" OR "lesser developed population" OR "lesser developed population" OR "under developed population" OR "underdeveloped world" OR "middle income countries" OR "underdeveloped own "low income countries" OR "low income populations" OR "low income populations" OR "low income populations" OR "low income populations" OR "lower income nations" OR "lower income populations" OR "underserved country" OR "lower income populations" OR "underserved population" OR "underserved population" OR "underserved world" OR "under served population" OR "underserved populations" OR "under served world" OR "under served populations" OR "under served world" OR "under served world" OR "under served populations" OR "poor population" OR "under served nation" OR "poor nations" OR "poor population" OR "poor populations" OR "poor populatio	211	0	9

Arab Republic" OR "El Salvador" OR "Eritrea" OR "Estonia" OR "Ethiopia" OR "Fiji" OR "Gabon" OR "Gabonese Republic" OR "Gambia" OR "Gaza" OR "Georgia Republic" OR "Georgian Republic" OR "Ghana" OR "Gold Coast" OR "Greece" OR "Grenada" OR "Guatemala" OR "Guinea" OR "Guiana" OR "Guiana" OR "Haiti" OR "Honduras" OR "Hungary" OR "India" OR "Maldives" OR "Indonesia" OR "Iran" OR "Iraq" OR "Jamaica" OR "Jordan" OR "Kazakhstan" OR "Kazakh" OR "Kenya" OR "Kiribati" OR "Korea" OR "Kosovo" OR "Kyrgyzstan" OR "Kirghizia" OR "Kyrgyz Republic" OR "Kirghiz" OR "Kirgizstan" OR "Lao PDR" OR "Laos" OR "Latvia" OR "Lebanon" OR "Lesotho" OR "Basutoland" OR "Liberia" OR "Libya" OR "Lithuania" OR "Macedonia" OR "Madagascar" OR "Malagasy Republic" OR "Malaysia" OR "Malaya" OR "Malay Sabah Sarawak" OR "Malawi" OR "Nyasaland" OR "Mali" OR "Malta" OR "Marshall Islands" OR "Mauritania" OR "Mauritius" OR "Agalega Islands" OR "Mexico" OR "Micronesia" OR "Middle East" OR "Moldova" OR "Moldovia" OR "Moldovian" OR "Mongolia" OR "Montenegro" OR "Morocco" OR "Mozambique" OR "Myanmar" OR "Myanma" OR "Burma" OR "Namibia" OR "Nepal" OR "Netherlands Antilles" OR "New Caledonia" OR "Nicaragua" OR "Niger" OR "Nigeria" OR "Northern Mariana Islands" OR "Oman" OR "Muscat" OR "Pakistan" OR "Palau" OR "Palestine" OR "Panama" OR "Paraguay" OR "Peru" OR "Philippines" OR "Philipines" OR "Philipines" OR "Phillippines" OR "Poland" OR "Portugal" OR "Puerto Rico" OR "Romania" OR "Rumania" OR "Roumania" OR "Russia" OR "Russian" OR "Rwanda" OR "Ruanda" OR "Saint Kitts" OR "St Kitts" OR "Nevis" OR "Saint Lucia" OR "St Lucia" OR "Saint Vincent" OR "St Vincent" OR "Grenadines Samoa" OR "Samoan Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR "Senegal" OR "Serbia" OR "Montenegro" OR "Seychelles" OR "Sierra Leone" OR "Slovenia" OR "Sri Lanka" OR "Ceylon" OR "Solomon Islands" OR "Somalia" OR "Sudan" OR "Suriname" OR "Surinam" OR "Swaziland" OR "Syria" OR "Tajikistan" OR "Tadzhikistan" OR "Tadjikistan" OR "Tadzhik" OR "Tanzania" OR "Thailand" OR "Togo" OR "Togolese Republic" OR "Tonga" OR "Trinidad" OR "Tobago" OR "Tunisia" OR "Turkey" OR "Turkmenistan" OR "Turkmen" OR "Uganda" OR "Ukraine" OR "Uruguay" OR "USSR" OR "Soviet Union" OR "Union of Soviet Socialist Republics" OR "Uzbekistan" OR "Uzbek" OR "Vanuatu" OR "New Hebrides" OR "Venezuela" OR "Vietnam" OR "Viet Nam" OR "West Bank" OR "Yemen" OR "Yugoslavia" OR "Zambia" OR "Zimbabwe" OR "Rhodesia" OR "Western Sahara" OR "Kuwait" OR "United Arab Emirates" OR "Qatar" OR "Nauru" OR "Tuvalu" OR "Bahamas" OR "South Africa" [All Fields])

PsycINFO: "Developing countr*" OR "developing population*" OR "less developed population*" OR "less developed world" OR "lesser developed countr*" OR "lesser developed nation*" OR "lesser developed population*" OR "lesser developed world" OR "under developed countr*" OR "under developed nation*" OR "under developed population*" OR "under developed world" OR "underdeveloped countr*" OR "underdeveloped nation*" OR "underdeveloped population*" OR "underdeveloped world" OR "middle income countr*" OR "middle income nation*" OR "middle income population*" OR "low income countr*" OR "low income nation*" OR "low income population*" OR "lower income countr*" OR "lower income nation*" OR "lower income population*" OR "underserved countr*" OR "underserved nation*" OR "underserved population*" OR "underserved world" OR "under served countr*" OR "under served nation*" OR "under served population*" OR "under served world" OR "deprived countr*" OR "deprived nation*" OR "deprived population*" OR "deprived world" OR "poor countr*" OR "poor nation*" OR "poor population*" OR "poor world" OR "developing econom*" OR "less developed econom*" OR "lesser developed econom*" OR "under developed econom*" OR "underdeveloped econom*" OR "middle income econom*" OR "low income econom*" OR "lower income econom*" OR "low gdp" OR "low gnp" OR "lower gdp" OR "lmic*" OR "third world" OR "lami countr*" OR "transitional countr*" OR "Africa" OR "Asia" OR "Caribbean" OR "West Indies" OR "South America" OR "Latin America" OR "Central America" OR "Afghanistan" OR "Albania" OR "Algeria" OR "Angola" OR "Antigua" OR "Barbuda" OR "Argentina" OR "Armenia" OR "Armenian" OR "Aruba" OR "Azerbaijan" OR "Bahrain" OR "Bangladesh" OR "Barbados" OR "Benin" OR "Byelarus" OR "Byelorussian" OR "Belarus" OR "Belorussian" OR "Belorussia" OR "Belize" OR "Bhutan" OR "Bolivia" OR "Bosnia" OR "Herzegovina" OR "Hercegovina" OR "Botswana" OR "Brazil" OR "Bulgaria" OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR "Burundi" OR "Urundi" OR "Cambodia" OR "Khmer Republic" OR "Kampuchea" OR "Cameroon" OR "Cameroon" OR "Cameron" OR "Camerons" OR "Cape Verde" OR "Central African Republic" OR "Chad" OR "Chile" OR "China" OR "Colombia" OR "Comoros" OR "Comoro Islands" OR "Comores" OR "Mayotte" OR "Congo" OR "Zaire" OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR "Croatia" OR "Cuba" OR "Cyprus" OR "Czechoslovakia" OR "Czech Republic" OR "Slovakia" OR "Slovak Republic" OR "Djibouti" OR "French Somaliland" OR "Dominica" OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR "Ecuador" OR "Egypt" OR "United Arab Republic" OR "El Salvador" OR "Eritrea" OR "Estonia" OR "Ethiopia" OR "Fiji" OR "Gabon" OR "Gabonese Republic" OR "Gambia" OR "Gaza" OR "Georgia Republic" OR "Georgian Republic" OR "Ghana" OR "Gold Coast" OR "Greece" OR "Grenada" OR "Guatemala" OR "Guinea" OR "Guam" OR "Guiana" OR "Guvana" OR "Haiti" OR "Honduras" OR "Hungary" OR "India" OR "Maldives" OR "Indonesia" OR "Iran" OR "Iraq" OR "Jamaica" OR "Jordan" OR "Kazakhstan" OR "Kazakh" OR "Kenya" OR "Kiribati" OR "Korea" OR "Kosovo" OR "Kyrgyzstan" OR "Kirghizia" OR "Kyrgyz Republic" OR

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Scopus: "Developing countr*" OR "developing population*" OR "less developed population*" OR "less developed world" OR "lesser developed countr*" OR "lesser developed nation*" OR "lesser developed population*" OR "lesser developed world" OR "under developed countr*" OR "under developed nation*" OR "under developed population*" OR "under developed world" OR "underdeveloped countr*" OR "underdeveloped nation*" OR "underdeveloped population*" OR "underdeveloped world" OR "middle income countr*" OR "middle income nation*" OR "middle income population*" OR "low income countr*" OR "low income nation*" OR "low income population*" OR "lower income countr*" OR "lower income nation*" OR "lower income population*" OR "underserved countr*" OR "underserved nation*" OR "underserved population*" OR "underserved world" OR "under served countr*" OR "under served nation*" OR "under served population*" OR "under served world" OR "deprived countr*" OR "deprived nation*" OR "deprived population*" OR "deprived world" OR "poor countr*" OR "poor nation*" OR "poor population*" OR "poor world" OR "developing econom*" OR "less developed econom*" OR "lesser developed econom*" OR "under developed econom*" OR "underdeveloped econom*" OR "middle income econom*" OR "low income econom*" OR "lower income econom*" OR "low gdp" OR "low gnp" OR "lower gdp" OR "lmic*" OR "third world" OR "lami countr*" OR "transitional countr*" OR "Africa" OR "Asia" OR "Caribbean" OR "West Indies" OR "South America" OR "Latin America" OR "Central America" OR "Afghanistan" OR "Albania" OR "Algeria" OR "Angola" OR "Antigua" OR "Barbuda" OR "Argentina" OR "Armenia" OR "Armenian" OR "Aruba" OR "Azerbaijan" OR "Bahrain" OR "Bangladesh" OR "Barbados" OR "Benin" OR "Byelarus" OR "Byelorussian" OR "Belarus" OR "Belorussian" OR "Belorussia" OR "Belize" OR "Bhutan" OR "Bolivia" OR "Bosnia" OR "Herzegovina" OR "Hercegovina" OR "Botswana" OR "Brazil" OR "Bulgaria" OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR "Burundi" OR "Urundi" OR "Cambodia" OR "Khmer Republic" OR "Kampuchea" OR "Cameroon" OR "Cameroons" OR "Cameron" OR "Camerons" OR "Cape Verde" OR "Central African Republic" OR "Chad" OR "Chile" OR "China" OR "Colombia" OR "Comoros" OR "Comoro Islands" OR "Comores" OR "Mayotte" OR "Congo" OR "Zaire" OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR "Croatia" OR "Cuba" OR "Cyprus" OR "Czechoslovakia" OR "Czech Republic" OR "Slovakia" OR "Slovak Republic" OR "Djibouti" OR "French Somaliland" OR "Dominica" OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR "Ecuador" OR "Egypt" OR "United Arab Republic" OR "El Salvador" OR "Eritrea" OR "Estonia" OR "Ethiopia" OR "Fiji" OR "Gabon" OR "Gabonese Republic" OR "Gambia" OR "Gaza" OR "Georgia Republic" OR "Georgian Republic" OR "Ghana" OR "Gold Coast" OR "Greece" OR "Grenada" OR "Guatemala" OR "Guinea" OR "Guam" OR "Guiana" OR "Guyana" OR "Haiti" OR "Honduras" OR "Hungary" OR "India" OR "Maldives" OR "Indonesia" OR "Iran" OR "Iraq" OR "Jamaica" OR "Jordan" OR "Kazakhstan" OR

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Note: In PubMed, searches were conducted with "All Fields" unless noted as "MeSH Terms"

Table 3. Quality Assessment for Included Systematic Reviews Based on AMSTAR Criteria

First author, date	Overall Scores	1. a priori	2. duplicate selection	3. lit. search	4. status of pub.	5. list of studies	6. study details	7. quality assessed	8. quality used	9. combine findings (M-A only)	10. pub. bias (M-A only)	11. conflict of interest
Berg, 2012	7/9 (8/11)	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N
Berg, 2013	6/9 (7/11)	Y	Y	N	Y	N	Y	Y	Y	Y	CA	N
Berg, 2014	5/9 (6/11)	Y	Y	N	Y	N	N	Y	Y	Y	CA	N
Campbell, 2008	1/9	Y	CA	N	N	N	N	N	N	N/A	N/A	N
Coker, 2007	2/9	Y	N	N	N	N	Y	N	N	N/A	N/A	N
Gilbert, 2015	3/9	N	Y	Y	Y	N	N	N	N	N/A	N/A	N
Hall, 2014	6/9 (8/11)	Y	Y	Y	N	N	Y	Y	Y	Y	Y	N
Iavazzo, 2013	2/9	Y	N	N	N	N	Y	N	N	N/A	N/A	N
Kimani, 2016	4/9	Y	Y	N	Y	N	N	N	Y	N/A	N/A	N
Kouyoumdjian, 2013	3/9	Y	Y	N	Y	N	N	N	N	N/A	N/A	N
Li, 2014	7/9 (8/11)	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N
Lin, 2007	2/9	Y	N	N	Y	N	N	N	N	N/A	N/A	N
Maman, 2000	2/9	Y	N	N	N	N	Y	N	N	N/A	N/A	N
Maxwell, 2015	6/9 (8/11)	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N
Meinck, 2015	4/9	Y	N	Y	Y	N	Y	N	N	N/A	N/A	N
Mmari, 2013	1/9	Y	N	N	N	N	N	N	N	N/A	N/A	N
Mpinga, 2016	3/9	Y	Y	N	Y	N	N	N	N	N/A	N/A	N
Norman, 2012	5/9 (7/11)	Y	Y	Y	N	N	Y	CA	Y	Y	Y	N
Pilgrim, 2012	3/9	Y	Y	N	N	N	Y	N	N	N/A	N/A	N
Redman-MacLaren, 2013	2/9	Y	N	Y	N	N	N	N	N	N/A	N/A	N
Sarkar, 2008	1/9	Y	N	N	N	N	N	N	N	N/A	N/A	N
Semahegn, 2015	3/9	Y	Y	N	N	N	Y	N	N	N/A	N/A	N
Shamu, 2011	4/9 (5/11)	Y	Y	Y	N	N	N	Y	N	Y	N	N
Stockman, 2013	3/9	Y	Y	N	N	N	Y	N	N	N/A	N/A	N
Thornton, 2015	5/9	Y	Y	Y	Y	N	Y	N	N	N/A	N/A	N

UNICEF, 2012	6/9	Y	N	Y	Y	N	Y	Y	Y	N/A	N/A	N
WHO, 2000	3/9	Y	N	N	Y	N	Y	N	N	N/A	N/A	N
WHO, 2013	2/9 (3/11)	Y	N	N	Y	N	N	N	N	Y	N	N

Note: M-A = meta-analysis. lit. = literature. pub = publication

- a. Quality score out of 11 for meta-analyses only.
- 1. Was an a priori study design provided?
- 2. Was there duplicate study selection and data extraction?
- 3. Was a comprehensive literature search performed?
- 4. Was the status of publication (e.g., grey literature) used as an inclusion criterion?
- 5. Was a list of studies (included and excluded) provided?
- 6. Were the characteristics of the included studies provided?
- 7. Was the scientific quality of included studies assessed and documented?
- 8. Was the scientific quality of the included studies used appropriately in formulating conclusions?
- 9. Were the methods used to combine the findings of included studies appropriate? (M-A only)
- 10. Was the likelihood of publication bias assessed? (M-A only)
- 11. Was the conflict of interest stated (for all included studies and the review itself)?

Table 4. Characteristics of the Included Systematic Reviews

Review (Author, date)	Adolescent Focus (Y/N)	Comp. adol. Groups (Y/N)	Total #	LMICs (#)	GW control (#)	GW analyzed (#)	Adolescent GW (#)	Age (range)	GBV Exposures	SRH Outcomes	AMSTAR
Berg, 2012	N	N	15	14	0	14	2	15-60	FGMC	SFxn	8/11
Berg, 2013	N	N	28	19	0	16	2	15-55	FGMC	Preg	7/11
Berg, 2014	N	N	57	47	0	42	6	0-70	FGMC	Gyn Preg SFxn	6/11
Hall, 2014	N	N	74	22	0	20	6	14-64	IPV SV	Abort	8/11
Kimani, 2016	N	N	44	26	0	25	4	-	FGMC	Gyn Menses Preg SFxn STI	4/9
Li, 2014	N	N	28	20	0	20	13	≥15	IPV SV	STI	8/11
Maxwell, 2015	N	N	10	4	0	4	1	11-55	IPV	Contra	8/11
Meinck, 2015	Y	N	23	23	0	8	0	0-47	CA CSA	Contra STI	4/9
Norman, 2012	N	N	124	6	0	2	0	16-26	CA	SB STI	7/11
Shamu, 2011	N	N	19	19	0	18	2	-	IPV SV	Preg SB STI	5/11
Thornton, 2015	N	N	14	14	0	9	1	-	CSA SV	STI	5/9
UNICEF, 2012	N	N	364	185	2	43	4	9-25	CA CSA	Gyn Preg SB STI	6/9
Totals	-	-	800	399	2	221	41	-	-	-	-

Note: Total= total # of articles included in the review. LMICs= total # of articles in the review that were from low- or middle-income countries. Comp. adol. Groups = total # of articles that compared adolescent age groups. GW control = # of articles the used gender as a control variable. GW analyzed = # of articles in which there was a separate analysis for women. Adolescent GW= total # of articles in the review analyzed data for adolescent girls and young women separately. Age= the composite age range of women and girls from the studies that analyzed them separately, in years. GBV Exposures: CA=childhood abuse - physical; CSA=childhood sexual abuse (contact/non-contact), FGMC= female genital cutting/ mutilation, IPV= intimate partner violence, SV= sexual violence. SRH Outcomes: Abort=abortion; Contra=contraception; DK=don't know; Emp=empowerment; Gyn=gynecological problem; Preg=pregnant or pregnancy; PSB=partner sexual risk behavior; SB=sexual behavior; SFxn=sexual function/dysfunction; STI=sexually transmitted infection

AMSTAR= AMSTAR quality assessment rating; range 0-9; low= 0-3, medium=4-6, high=7-9.

Table 5. Characteristics of Empirical Studies

1 st Author (year)	Location / Rural or Urban	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24 yrs only
Brewer 2007	Kenya -urban/rural	X-sect, probability, nat rep. Virgins & adolescents. Unmarried.	$N_{\text{TOT}} = 6,182$ $N_{\text{GW}} = 3,268$ $N_{15-24} = 1,416$ $N_{\text{VIRGIN}} = 539$ $R_{\text{AGE}} = 15-59_{\text{GW}}$ virgin median age = 17	FGMC: Y/N, self-reported circumcision (likely clitoridectomy).	STI: Y/N, HIV Dx, 2 dry blood tests (1 screen, 1 confirm).	X
Browning 2010	Ethiopia <i>Bahir Dar</i> -urban	X-sect, case review, fistula due to prolonged obstructed labor. Marital status N/A.	$N_{\text{TOT}} = 492$ $N_{\text{GW}} = 492$	FGMC: Y/N, Type I or II, chart notation.	Preg: fistula size. Preg: fistula scarring. Preg: fistula presentation site.	
Caceres 2000	Peru <i>Lima</i> -urban	X-sect, random select, registering for military, seeking work or study permit. Marital status N/A.	$R_{\rm AGE} = 16-30$	SV: Y/N, coercion at sex initiation (pressure or phy force).	Preg: Y/N, unplanned preg. SB: age at sex. debut. SB: LT, # of ptnrs SB: LT, Y/N ever paid for or been paid for sex. SB: sex under influence of alcohol or drugs (never/infreq vs freq/very freq). Emp: sex. knowledge, 16 T/F items. STI: LT, Y/N, Sx or Dx of urethritis, genital ulcers, or vaginitis.	

1 st Author (year)	Location / Rural or Urban	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24 yrs only
Dunkle 2004b	South Africa Soweto -urban	X-sect, convenience. Pregnant antenatal clinic visitors.	$N_{\text{TOT}} = 1,395$ $N_{\text{GW}} = 1,395$ $R_{\text{AGE}} = 16-44$ 16-20 (21%), 21-25 (32%), 26-30 (25%), 31-35 (14%), 36+ (8%)	SV: forced 1 st sex (forced, raped).	SB: age at sex debut.	Ţ
Elnashar 2007	Egypt Benha City -urban/rural (71% urban)	X-sect, random select. Hospitals, health centers, clinics. Newly married (<5 yrs).		FGMC: Y/N, "circumcised."	Gyn: vag discharge (no, sometimes, always). Gyn: Y/N, burning urination. Gyn: Y/N, involuntary urination. Menses: Y/N, irregular. Menses: dysmenorrhea (no/mild, mod, sev). Preg: Y/N, "preg occurrence." Preg: type of 1st delivery (normal, cesarean, other). Preg: problems during 1st delivery (none, episiotomy, tear) SFxn: Y/N, dyspareunia. SFxn: Y/N, loss of libido. SFxn: wife satisfaction (pos, neg, DK).	
Jackson 2005	Ghana Kassena- Nankana -rural	X-sect. Matched sample of cut women with demographic surveillance data. Married.	$N_{\text{TOT}} = 6,501$ $N_{\text{GW}} = 6,501$ $R_{\text{AGE}} = 20-49$	FGMC: Y/N, self-report cut.	Contra: LT, Y/N, any pill, IUD, diaphragm, foam, condom, or male sterilization.	

1 st Author (year)	Location / Rural or Urban	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24 yrs only
Jewkes 2006	South Africa Eastern Cape provrural	X-sect, convenience, from 70 villages in an intervention study. Sex active. Marital status N/A.		2+CA: Y/N, any CSA, EA, N (emo or phy), or PA (modified CTQ). 2+IPV: LT, "broad" (phy & sex. IPV, or 1 type ≥2x) versus "limited" (no IPV or 1 type/1x; WHO). SV: LT, Y/N, rape by a non-ptnr. SV: LT, Y/N, coercion at 1 st sex.	Contra: Y/N, correct condom use at last sex w/ main ptnr. SB: # of casual male ptnrs. SB: PY, Y/N, 3+ ptnr. SB: Y/N, transactional sex (food, cosmetics, clothes, transport, items for children or family, school fees, somewhere to sleep, or cash). STI: Y/N, HIV Dx, 2 rapid blood tests (1 screen, 1 confirm).	X
Kacanek 2013		X-sect & long, convenience. RCT of HIV prevention gel. Sex active, HIV negative at baseline. Married (61%).	$N_{\text{TOT}} = 4,505$ $N_{\text{GW}} = 4,505$ $R_{\text{AGE}} = 18-49$	Phy IPV: P3M, Y/N, hit, shoved, slapped, kicked, threatened/used a weapon. Psy IPV: P3M, Y/N, afraid of ptnr scream/ shout, afraid of phy IPV. Psy IPV: P3M, Y/N, insult, yell, humiliate, swear at. Sex IPV: P3M, Y/N, forced sex. 2+IPV: P3M, any phy, psy, sex IPV.	Contra: Y/N, condom adherence, always use. Contra: Y/N, diaphragm adherence at last sex. SB: P3M, Y/N, >1 ptnr. SB: Y/N, exchanged sex for money, food, drugs, shelter. PSB: Y/N, ptnr infidelity.	
Kalyanwala 2010	India Bihar & Jharkhand -urban (78%)	Clinical sample, 16 clinics, visit for abort. No prev preg/had terminated prev preg. Unmarried.	$N_{\text{TOT}} = 549$ $N_{\text{GW}} = 549$ $R_{\text{AGE}} = 15-24$		Abort: 1 st trimester vs 2 nd trimester.	X

1 st Author (year)	Location / Rural or Urban	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24 yrs only
Kanki 1992	Senegal Dakar, Kaolack, & Ziguinchor -urban	X-sect, convenience. Visited clinics for registered prostitutes in 3 sites. Non- Senegalese excluded. Marital status N/A.	$N_{\text{TOT}} = 1,280$ $N_{\text{GW}} = 1,280$ $R_{\text{AGE}} = 20-69$ 20-29 (28.5%), 30-39 (51.5%), 40-49 (17.5%), 50-59 (4%), 60-69 (1%)	FGMC: "female excision (clitoridectomy)," usually performed at puberty.	STI: Y/N, HIV-2 Dx, positive antibodies test.	-
Kiarie 2006	Kenya <i>Nairobi</i> -urban	X-sect, convenience. Pregnancy, visited antenatal clinic & accepted HIV test. Married/partnered (90% lived w/ ptnr).	$N_{\text{TOT}} = 2,405$ $N_{\text{GW}} = 2,104$ $R_{\text{AGE}} = \text{N/A}$ (compared <20 &>20).	2+ IPV ³ : LT from current ptnr, Y/N phy (assaulted, hit, slapped, pushed), psy (abusive language, yelling, humiliation, actions intended to cause emo pain) or fin (withholding fin support, forbidden to earn).	Contra: Y/N, used condoms after pos. HIV-1 results. SB: age at first sex <17yrs vs >17yrs. STI: Y/N, HIV-1 Dx, rapid assay test, pos results confirmed w/ 2 nd test. STI: LT, Y/N ever had STI.	
Kouyoumdji an 2013	Uganda <i>Rakai</i> -rural	X-sect & long. RCT, Rakai Community Cohort Study. In a sex. rel. Married (87%).	$N_{\text{TOT}} = 10,198$ $N_{\text{GW}} = 10,198$ $R_{\text{AGE}} = 15-59$ 15-19 (25%), 20-24 (29%), 25-34 (30%), 35+ (16%)	CSA: "childhood or adolescent sex. abuse" 2+ IPV: LT & PY, any phy, sex, or verbal IPV (modified CTS2). Phy IPV: LT & PY (modified CTS2). Psy IPV: LT & PY, verbal (modified CTS2). Sex IPV: LT & PY (modified CTS2).	STI: Y/N, HIV Dx, 2 assays, confirmed w/ western blot.	

1 st Author (year)	Location / Rural or Urban	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24 yrs only
Luo 2008	China -urban	X-sect, prob, stratified cluster, nat. rep. Registered households & migrants in urban portion. Majority married/ ptnr'd (~86% w/ stable ptnr).	$N_{\text{TOT}} = 2,994$ $N_{\text{GW}} = 1,519$ $R_{\text{AGE}} = 20-64$ $20-29_{\text{GW}}$ (25%), $30-39_{\text{GW}}$ (29%), $40-49_{\text{GW}}$ (27%), $50-64_{\text{GW}}$ (19%)		SB: >2 LT sex ptnrs. SB: >1 PY sex ptnr. SB: Y/N, ever had sex w/other during current rel. SB: PW, Y/N masturbation. SB: "Thinks about sex often" >1x wk SB: "High variety of sex practices" = top 25%, sum 9 PY acts (3-pt scale, never, sometimes, often.) PSB: Y or "perhaps"/N, ptnr affair(s). Emp: PY, sex to please ptnr, often/sometimes vs rarely/never. Emp: PY, asked to do unwanted sex act, never vs sometimes/often. Emp: LT, Y/N, unwanted sex w/ptnr, "unwilling but still had to concede." SFxn: PY, Y/N "highly dysfunctional" = top 25% sum of 4 items (no pleasure, genital pain, vag dryness/insufficient lube, unable to achieve orgasm) 3-pt freq scale ("never" to "yes, > 2 months"). STI: PY, any genito-urinary Sx, 4 items (burning pain while urinating; genital lesion, blister, or sore; vag discharge of unusual color or odor; genital warts). STI: LT, any syphilis, gonorrhea, chlamydia, herpes, or trichomonas, Dr. Dx.	

1st Author	Location /	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24
(year)	Rural or Urban					yrs only
Megafu 1983	Nigeria <i>Ibos</i> -urban/rural	X-sect, convenience. Gynecological clinic patients. Married (76%).	$N_{\text{TOT}} = 500$ $N_{\text{GW}} = 500$ $R_{\text{AGE}} = 16-45$	FGMC: "female circumcision," usually w/in first 8 days of life or puberty, usually part/all clitoris removed, sometimes labia minora.	SB: Y/N, pre-marital 1 st coitus. SFxn: sex excited organ (lips, breast, clitoris). SFxn: Y/N, orgasm during intercourse.	
Speizer 2009	South Africa -urban/rural	X-sect., nat rep., stratified, random selection. Sex. experienced. Unmarried.	$N_{\text{TOT}} = 3,865$ $N_{\text{GW}} = 3,865$ $R_{\text{AGE}} = 15-24$	SV: LT, Y/N, intercourse because threatened or used phy force.	Contra: Y/N, condom use at last sex. Preg: Y/N, "adolescent pregnancy experience," preg < 18yrs. STI: Y/N, HIV Dx, oral fluid, antibodies test.	X
Stewart 2002	Central African Republic -urban/rural (34% urban)	Stratified, 2-stage prob, secondary analysis (DHS 1994-5). Married/cohabitating.	$N_{\text{TOT}} = 2,188$ $N_{\text{GW}} = 2,188$ $R_{\text{AGE}} = 15-49$ 15-19 (11%), 20-24 (18%), 25-29 (19%), 30-34 (18%), 35-39 (14%), 40-44 (10%), 45-49 (10%).	FGMC: Y/N FGMC: timing (w/in 5yrs of marriage, >5yrs prior to marriage).	SB: PM, intercourse freq, high ($\geq 5x$) vs low ($\leq 5x$).	

1st Author	Location /	Study Design	Sample	Exposures ¹	Outcomes ¹	10 - 24
(year)	Rural or Urban					yrs only
Wu 2005	China Henan prov., Liaoning prov., Shannxi prov., & Tianjing provurban/rural	X-sect, 8 hospitals randomly selected. Convenience, requesting preg termination. Married (77%).	$N_{\text{TOT}} = 1,215$ $N_{\text{GW}} = 1,215$ $R_{\text{AGE}} = 15-49$ $M_{\text{AGE}} = 27$ < 20 (4%), 20- $30 (71%)$	2+ IPV: LT, Y/N, phy IPV (beaten, slapped, pushed, hit w/ fist, kicked, cut, burned injury from tool or weapon) and/or psy IPV (verbal abuse such as shouting, name calling, threatened to break off rel, humiliated in front of	Abort: LT, Y/N, prev induced abort.	
	-uroan/rurar			others, they or family threatened w/ beating).		

¹ Measures are author-created unless otherwise specified.

Study Design: long=longitudinal; nat prob=national probability; nat rep=nationally representative; pop-base=population based; prov.=province; RCT=randomized control trial; rel=relationship; retro=retrospective; X-sect=cross-sectional; yrs=years

Sample: N_{GW} =Number of girls and/or women in study; N_{TOT} =Total number of participants in study; N_{VIRGIN} = Total number of virgins in study; M_{AGE} =Mean age; R_{AGE} =Age range

Exposures/Outcomes: Abort=abortion; btwn=between; Contra=contraception; CSA=childhood sexual abuse (contact/non-contact); CSA-C=childhood sexual abuse with physical contact, CSA-NC=childhood sexual abuse with no physical contact; DK=don't know; Emp=empowerment; Dx=diagnosis; emo=emotional, fin=financial; freq=frequency, GBV=gender-based violence; Gyn=gynecological problem; HIV=human immunodeficiency virus; infreq=infrequent; IPV=intimate partner violence; LT=life time; lube = lubrication; maltx=maltreatment; N=neglect; neg=negative; pos=positive; phy=physical; PM=past month; P3M=past 3 months; PW=past week; P2W=past two weeks; PY=past year; preg=pregnant or pregnancy; prev=previous; PSB=partner sexual risk behavior; psy=psychological; sev=severity; sex.=sexual or sexually; SB=sexual behavior; SFxn=sexual function/dysfunction; STI=sexually transmitted infection; SV=sexual violence; Sx=symptom(s); vag=vaginal; vs=versus; w/=with; w/in=within

Measurement: CTQ=short form Childhood Trauma Questionnaire (Bernstein et al., 1994); CTS2=conflict tactic scale (Straus et al., 1996); US-NHSLS=US National Health and Social Life Survey (Laumann et al., 1994); WHO = World Health Organization Violence Against Women instrument (WHO, 2000).

² GBV exposure is treated as an outcome variable in source study.

³ GBV exposure is the outcome for SB and STI, not for HIV.

Table 6. Extracted Results from 19 Unique Analyses Published in 17 Empirical Studies (negative [-], no [0], or positive [+] association reported).

Outcomes							Expo	sures							
		(Child Abuse /	Maltre	eatme	ent			FGMC	CM		IPV	I		SV
	CSA	CSA-C	CSA-NC	EA	N	PA	WA	2+			Phys.	Psy.	Sex	2+	
Abortion															
Kalyanwala 2010 ¹															+
Wu 2005														+	
Contraception/STI Preve	ntion														
Jackson 2005									-						
Jewkes 2006														0	
Kacanek 2013-L ^{2, 3}											- 0				
Kiarie 2006														0	
Speizer 2009															-
Gynecological Problems															
Elnashar 2007 ⁴									00 +						
Menstrual Problems															
Elnashar 2007									++						
Pregnancy															
Pregnancy Complications															
Browning 2010									000						
Elnashar 2007 ⁵									0++						
Adolescent Pregnancy															
Speizer 2009															0
Unplanned Pregnancy															
Caceres 2000															0
Sexual Behavior															
Age of sexual debut															
Caceres 2000															-

Outcomes							Expo	sures							
		(Child Abuse /	Maltre	eatme	ent			FGMC	CM		IPV	I		SV
_	CSA	CSA-C	CSA-NC	EA	N	PA	WA	2+			Phys.	Psy.	Sex	2+	
Dunkle 2004b											-	-			-
Kiarie 2006 ^{6, 7}														-	
Number of Sexual Partners															
Caceres 2000															0
Jewkes 2006 ⁸								+						++	
Kacanek 2013-C														+	
Luo 2008		000													
Transactional Sex															
Caceres 2000															0
Jewkes 2006														+	
Kacanek 2013-C														+	
Other Sexual Behaviors															
Caceres 2000															0
Luo 2008 ⁹		0++													
Megafu 1983									0						
Stewart 2002									00						
Partner Sexual Risk Behavio	or														
Kacanek 2013-C														+	
Luo 2008		+													
Sexual Empowerment															
Refusing unwanted behavior	^														
Luo 2008 ¹⁰		00+													
Sexual Knowledge															
Caceres 2000															0
Sexual Function															
Pleasure/Orgasm															
Elnashar 2007									-						

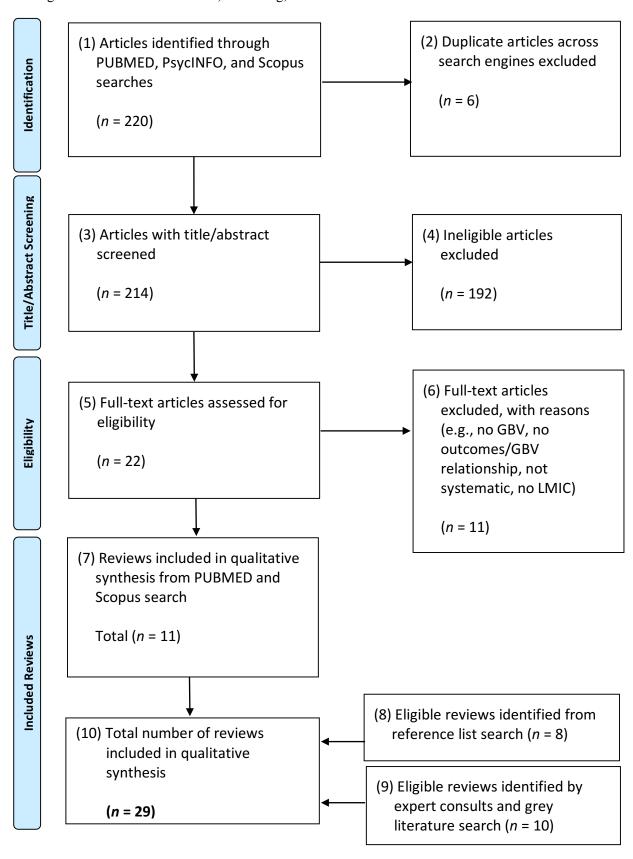
Outcomes							Expo	sures							
	Child Abuse / Maltreatment								FGMC	CM	IPV				SV
	CSA	CSA-C	CSA-NC	EA	N	PA	WA	2+			Phys.	Psy.	Sex	2+	
Megafu 1983 ¹¹											•				
Sexual Dysfunction															
Elnashar 2007									++						
Luo 2008		+													
STIs															
HIV															
Brewer 2007									0						
Jewkes 2006								0						+	00
Kanki 1992 ¹²									-						
Kiarie 2006														0	
Kouyoumdjian 2013-C ²											+	+	0	+	
Kouyoumdjian 2013-L ¹³											++	++	0+	++	
Speizer 2009															0
Other STIs															
Caceres 2000															+
Kiarie 2006														+	
Luo 2008		++													

- 1. Abortion outcome was a comparison between 1st trimester and 2nd trimester, SV more likely to be 2nd trimester.
- 2. Conducted both cross-sectional (C) and longitudinal (L) analyses.
- 3. Two contraceptive outcomes, different relationship for phy IPV: -= condom use, 0 = diaphragm use.
- 4. Three gynecological problems outcomes: 0 = burning urination, 0 = involuntary urination, + = vaginal discharge (more likely to be sometimes or always vs. none).
- 5. Four pregnancy outcomes: 0 = type of 1st delivery, += pregnancy occurrence, += problems during 1st delivery
- 6. GBV is the outcome variable in source study for sexual behavior and STI, but not for birth control or HIV.
- 7. Comparison between age <17 and age < 17.
- 8. 2+ child abuse was only examined for 3+ ptnrs in the last year, not for other SB measures.
- 9. Three other sexual behavior outcomes: 0 = thinking about sex, + = masturbation, + = high variety of sexual practices.
- 10. Three sexual empowerment outcomes: 0 = sex to please ptnr, 0 = unwanted sex, + = unwanted sex act.
- 11. Two pleasure outcomes: = clitoris less erotic compared to labia, breasts; = orgasm.
- 12. Sample of women in prostitution.
- 13. Two IPV measures (PY, LT): 0 = PY sexual IPV, + = LT sexual IPV.

Note: 2+ = combination of two or more types of child abuse/maltreatment or IPV, see study entry in Table 5. for specific combinations of abuse. CM = child marriage; CSA = childhood sexual abuse (contact/non-contact); CSA-C = child sexual abuse with contact; CSA-NC = child sexual abuse with no physical contact; EA = emotional abuse; FGMC = female genital mutilation/cutting; HIV = human immunodeficiency virus; IPV = intimate partner violence; LT = lifetime; N = neglect, PA = physical abuse; phy = physical; psy = psychological; ptnr = partner; PY = past year; STI = sexually transmitted infection; SV = sexual violence; WA = witness of parental abuse

FIGURES

Figure 1. Flow Chart of Search, Screening, and Selection Processes



APPENDICES

Appendix 1. Grey Literature Search Websites

Organization	Website(s)
UNICEF	https://www.unicef.org/
UNICEF Innocenti Research Centre	https://www.unicef-irc.org/
WHO	http://www.who.int/en/
UN Women	http://www.unwomen.org/en
Save the Children	http://www.savethechildren.org/
CARE	http://www.care.org/
Campbell Collaboration	https://www.campbellcollaboration.org/
Better Care Network	http://www.bettercarenetwork.org/
PLAN International	https://plan-international.org/
The Global Initiative to End All Corporal Punishment of Children	http://www.endcorporalpunishment.org/
Terre des Hommes	http://www.childtrafficking.com/
ECPAT	http://www.ecpat.org/
UNFPA	http://www.unfpa.org/
World Association for Sexual Health	http://www.worldsexology.org/
Sexual Violence Research Initiative	http://www.svri.org/
Global Fund for Women	https://www.globalfundforwomen.org/
Ford Foundation	https://www.fordfoundation.org/
ICRW	http://www.icrw.org/
Population Council	http://www.popcouncil.org/
Pathfinder International	http://www.pathfinder.org/
EngenderHealth	https://www.engenderhealth.org/index- main.php
What Works to Prevent Violence Against Women and Girls Programme (DFID)	http://whatworks.co.za/

- Appendix 2. Eligible Studies from Data Extraction Phase Not Yet Extracted (n = 66)
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