Mental health, empowerment, and violence against young women in lower-income countries: A review of reviews

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Keywords	gender-based violence; low- and middle-income countries; mental health; empowerment; systematic review; adolescent girls;
Taxonomy	Violence, Adolescent Development, Cultural Context

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Research Data Related to this Submission

There are no linked research data sets for this submission. The following reason is given:
Data were extracted from eligible articles in each systematic review and are reported in the supplemental online files attached.

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Gender-based violence (GBV) against women is a pervasive global human-rights violation. This systematic review of reviews synthesized research about the mental health and empowerment outcomes of GBV for adolescent girls and young women (ages 10-24) in low- and middle- income countries (LMIC). GBV exposures included child maltreatment, female genital mutilation/cutting, child marriage, intimate partner violence (IPV), and non-partner sexual violence. PubMed and PsycINFO searches were supplemented with expert consultations and searches of reference lists and key organizational websites. Sixteen systematic reviews were quality rated and summarized. Study-level data were extracted from the five highest quality reviews ($N = 25$ unique studies) and results from 41 samples were synthesized. Empowerment studies were too few to synthesize. Reviews and extracted studies were predominantly from Asia and Africa and addressed child maltreatment, IPV, and non-partner sexual violence. We included combined samples with adolescent girls and adult women (ages 9-60 years), and found consistent associations between GBV and composite measures of mental health, suicidal ideation and behavior, and symptoms of depression, posttraumatic stress, and eating disorders. Findings suggest that GBV must be addressed to cultivate mental health for adolescent girls and young women globally.

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Mental Health, Empowerment, and Violence Against Young Women in Lower-Income Countries: A Review of Reviews

Gender-based violence (GBV) against women and girls is a human-rights violation and a salient problem in global public health. The General Assembly of the United Nations (UN) defines GBV against women and girls as "any act of violence that results in, or is likely to result in, physical, sexual, or psychological harm or suffering . . . including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life" (Resolution 48/104 1993, article 1, para.1). Research has documented many serious acute, chronic, and intergenerational social, health, and economic consequences of GBV for women and girls across the life-course (Yount, DiGirolamo, & Ramakrishnan, 2011; Yount, Krause, & VanderEnde, 2016). The experience of multiple forms of GBV victimization (poly-victimization) across the life-course may exacerbate adverse effects (Yount, Krause, & Miedema, 2017). Due to its many harmful effects, preventing GBV remains a priority for those aiming to promote gender equality and to empower all women and girls globally (UN, 2015).

Although attention to GBV has increased, the relationship between GBV against adolescent girls and young women and mental health and empowerment repercussions is not fully documented in low-and middle-income countries (LMICs). Gains made thus far in the global understanding of GBV against women and girls come disproportionately from studies based in high-income countries with adult women. This body of knowledge is important, but may incorporate biases inherent in Western theory, methodologies, instrumentation, and meaning-making. Culturally grounded research situated in LMICs is essential to avoid the perception that GBV interventions are attempts to Westernize other cultures (Choudhury, 2015). In this study, we synthesize research on the mental health and empowerment outcomes of GBV against adolescent girls and young women in LMICs. This review can inform policy and prevention efforts that foster security of person, psychological integrity, and access to new resources for girls and young women.

GBV in the Context of LMICs

GBV against women and girls is embedded in a broader system of unequal power relations characterized by widespread gender-based discrimination, sexist norms, and stereotypes (Connell, 1987, 2009; Fregoso & Bejarano, 2010; UN, 2015). Although boys and subjugated groups of men may experience gendered forms of violence and assault, men's disproportionate social, political, and economic power protects them as a group and places the burden of GBV on women and girls (Connell, 1987, 2009; United Nations Children's Fund [UNICEF], 2014a; Yount, James-Hawkins, Cheong, & Naved, 2016). Women and girls generally have less access to resources and power that make avoiding, reporting, or escaping GBV possible. Acts of GBV against women and girls often are not recognized as abusive or problematic because they are lawful or socially permitted as customary practices in many countries (Palermo, Bleck, & Peterman, 2013; UNICEF, 2014a).

Early exposure to GBV is formative, shaping girls' physical and emotional well-being, as well as access to economic, legal, and educational resources. Adolescence and young adulthood (roughly age 10 to 24) is a rapid developmental period of biopsychosocial change that is linked to the onset of exploring romantic feelings, navigating dating and courtship, and understanding sexuality (Fatusi & Hindin, 2010). These maturational processes and life experiences expose girls to additional risks for sexual coercion and assault, forced first sexual experience, and dating violence (Decker et al., 2015; Patton et al., 2016; UNICEF, 2014a). Exposure to GBV during adolescence or young adulthood also increases the risk of re-exposure or of experiencing other types of concurrent GBV (poly-victimization) over the life-course and across different social contexts (Yount & Abraham, 2007; Yount & Carrera, 2006; Yount & Li, 2010; Yount et al., 2017). Poly-victimization is associated with a range of negative mental health outcomes for children and adolescents including depression, Posttraumatic Stress Disorder (PTSD), and anxiety (Finkelhor, Ormrod, & Turner, 2007; Finkelhor, Turner, Hamby, & Ormrod, 2011; Lagdon, Armour, & Stringer, 2014; Sabina & Straus, 2008). Understanding how concurrent and recurring GBV in childhood and adolescence may influence mental health and psychological empowerment as adolescent girls transition to adulthood is important.

Adolescent girls and young women living in LMICs may face additional context-specific barriers to safety and bodily integrity. More so than in Western contexts, adolescent girls seeking autonomy and expanded opportunities in some LMICs may violate normative expectations of their gender roles, drawing sanctions in public and private spheres and increasing their risk of GBV (Population Council, 2013). In LMICs, acute and chronic circumstances such as poverty, conflict, natural disasters, disease and infection, and lack of access to support services and legal protection increase vulnerability to GBV (World Health Organization [WHO], 2005). War and civil conflict markedly increase the risk of sexual violence and rape in some LMICs, because they are commonly used tactics of war (UNICEF, 2005).

Forms of GBV especially relevant for adolescent girls and young women in LMICs include child maltreatment, female genital mutilation/cutting (FGMC), child marriage, dating and intimate partner violence (IPV), and sexual violence perpetrated by non-partners. *Child maltreatment* is physical, sexual, or psychological punishment or violence against children, including neglect or negligence (UNICEF, 2014c). Minimum prevalence estimates of child maltreatment have approached or exceeded 50% for Africa and Asia and exceeded 30% for Latin America (Hillis, Mercy, Amobi, & Kress, 2016). Girls tend to experience child maltreatment at higher rates than boys: approximately 50% of sexual assaults worldwide are perpetrated against girls in childhood and early adolescence (UN Population Fund [UNFPA], 2005).

FGMC and child marriage are widespread in LMICs. *FGMC* includes all procedures in which the external female genitalia are removed partially or completely, and other injuries to the female genitals for non-medical reasons (WHO, 2016). Early adolescent girls (10-14 years) in more than 29 countries remain at risk (Population Reference Bureau, 2017), and 200 million girls and women have been subjected to FGMC (UNICEF, 2016). Worldwide, 700 million women have experienced *child marriage*—before age 18, and 250 million girls have experienced *very early child marriage*—before age 15 (UNICEF, 2014b). While the global rate of child marriage has declined, population growth is expected to result in absolute increases in the number of child brides (UNICEF, 2014b).

IPV includes physical, sexual, and psychological violence perpetrated by a former or current cohabiting or non-cohabiting intimate partner (WHO, 2013). Across 30 LMICs, 28% of adolescent girls and 29% of young women experienced physical IPV, sexual IPV, or both (Decker et al., 2015). Globally 20% to 75% of ever-partnered women have experienced psychological IPV (WHO, 2005). Adolescent girls and young women in LMICs are at heightened risk of poly-victimization because they may experience FGMC, child marriage, and IPV in close succession (Yount et al., 2017). *Non-partner sexual violence* refers to any sexual act, attempt to obtain a sexual act, or unwanted sexual comments or advances from a non-partner directed at a person using coercion, pressure, intimidation, or physical force (WHO, 2012). Sexual violence before age 18 is generally seen as a sub-type of child maltreatment, although some estimates of non-partner sexual violence in adulthood include women as young as 15 (WHO, 2013). An estimated 1 in 14 women has experienced non-partner sexual violence since age 15 (WHO, 2013). Across 30 LMICs, forced first sex was reported by 15% of sexually experienced 15- to 19-year-olds and 11% of sexually experienced 20- to 24-year-olds (Decker et al., 2015). Each form of GBV is a unique exposure that may have a distinct impact on adolescent girls and young adult women in countries around the world, while concurrent or repeated exposure may have a cumulative, combined effect.

The Current Study

In this study we aimed to assess the mental health and empowerment outcomes associated with GBV for adolescent girls and young women in LMICs through a systematic review of reviews. This review of reviews provides a synthesis of the current state of global research regarding GBV, mental health, and empowerment by evaluating the methodological quality of existing systematic reviews and summarizing the results of the empirical studies included in the highest-quality reviews. In addition, this review of reviews enables the identification of neglected mental health and empowerment outcomes. Identifying gaps in the literature can guide research and intervention strategies specific to LMIC contexts. A review of reviews also provides a comparison of the relationship between exposures and outcomes across a range of countries, samples, and study types. Considering global gender inequality, the context-

specific risk factors faced by adolescent girls and young women in LMICs, and increasing global attention to GBV and mental health and empowerment, this review of reviews is a timely contribution.

In response to the United Nation's 2030 goal for ensuring healthy lives and promoting mental well-being, attention to the mental health of adolescent girls and young women in LMICs is a global imperative. Exposure to GBV may have substantial mental health corollaries, including mood disorders (e.g., depression), anxiety disorders (e.g., generalized anxiety, phobias), PTSD, eating disorders (e.g., anorexia nervosa), suicide, self-injurious behavior, and substance-related disorders, among others (UNICEF, 2012, 2014c; WHO, 2005, 2013). Recent studies have begun to show a link between child maltreatment (UNICEF, 2012), FGMC (Andro, Cambois, & Lesclingand, 2014), child marriage (Gage, 2013; Raj, 2010), physical IPV, sexual IPV, and non-partner sexual violence (Decker et al., 2015), and psychological problems for adolescent girls and young women in LMICs.

GBV also has consequences for psychological well-being beyond the mere presence or absence of psychopathology. GBV is used to subordinate and oppress, infringing on adolescent girls' and young women's capacity and ability to fulfill their individual, relational, and collective needs (Prilleltensky, 2008). Empowerment theorists have proposed dynamic relational processes through which marginalized groups can gain increased control over their lives and bodies. Empowerment processes are multifaceted, having: a) intrapersonal components like self-efficacy and beliefs about one's abilities, b) interpersonal components like an awareness of power dynamics in one's social context and knowledge about how to access needed resources, and c) behavioral components like actions and choices consistent with one's goals (Cattaneo & Chapman, 2010; Kabeer, 1999; Rappaport, 1987; Zimmerman, 1995). Child maltreatment (Al-Fayez, Ohaeri, & Gado, 2012) and sexual violence (Benight & Bandura, 2004) may reduce self-efficacy and self-esteem. Child marriage has been connected to girls' reduced power to negotiate and make decisions (Santhya et al., 2010), and IPV has been related to lower levels of freedom of movement, power, and control in women's relationships (Grose & Grabe, 2014). The influence of exposure to GBV on empowerment in adolescence and young adulthood is understudied in LMICs. This

review of systematic reviews synthesizes the state of literature on GBV and mental health and empowerment at a moment when all three are receiving increased international attention.

Method

We followed the Assessment of Multiple Systematic Reviews (AMSTAR) guidelines for conducting a systematic review of reviews (Shea et al., 2007).

Search Strategy

We searched PubMed and PsycINFO electronic online databases using a list of comprehensive search strings (Online Supplement 1). To identify additional reviews, we screened the reference lists and contacted the corresponding author(s) of eligible reviews from the database search. Key organizational websites (Online Supplement 2) were searched to capture non-peer reviewed reviews.

Inclusion Criteria

This review of reviews included original systematic reviews of primary studies but excluded narrative reviews and reviews of reviews. We allowed non-peer reviewed reviews and those which were not explicitly labeled "systematic." Reviews were included if they synthesized studies with human subjects, included at least one study with adolescent girls and young women 10- to 24-years-old, were written in the English language, and were published between 2000 and the date of the search (September 5, 2016). Reviews must have included at least one study sample from an LMIC, defined using the World Bank country classification system (World Bank, 2016) and terms such as "developing" or "less developed" country. The reviews must have addressed at least one of the five *a priori* GBV exposures of interest (child maltreatment, FGMC, child marriage, IPV, non-partner sexual violence) and its quantitative association with at least one *a priori* mental health and/or empowerment outcome.

Mental health outcomes included mood, substance-related, eating, anxiety, and stress disorder diagnoses recognized by the American Psychiatric Association's (APA) Diagnostic and Statistical Manual (DSM-V; APA, 2013) and the International Statistical Classification of Diseases and Health Related Problems (WHO, 1992) as well as symptoms of these disorders below diagnostic cut-points. Suicidal ideation, plans, and attempts, and self-injurious behaviors also were included. Empowerment

outcomes included intrapersonal, interpersonal, and behavioral elements (i.e., self-efficacy, self-esteem, agency, aspirations, capacities, self-reflection, community engagement, decision-making, and resilience; Online Supplement 1). All authors met periodically to ensure the criteria were applied consistently across articles and to resolve discrepancies by consensus.

Quality Assessment

We duplicate-rated the reviews for quality using AMSTAR criteria (Shea et al., 2007). The AMSTAR checklist specified criteria to evaluate review designs, search strategies, inclusion criteria, quality assessment of included studies, methods for synthesizing included studies, publication bias, and conflicts of interest. AMSTAR scores range from 0 to 11.

Data Extraction and Analysis

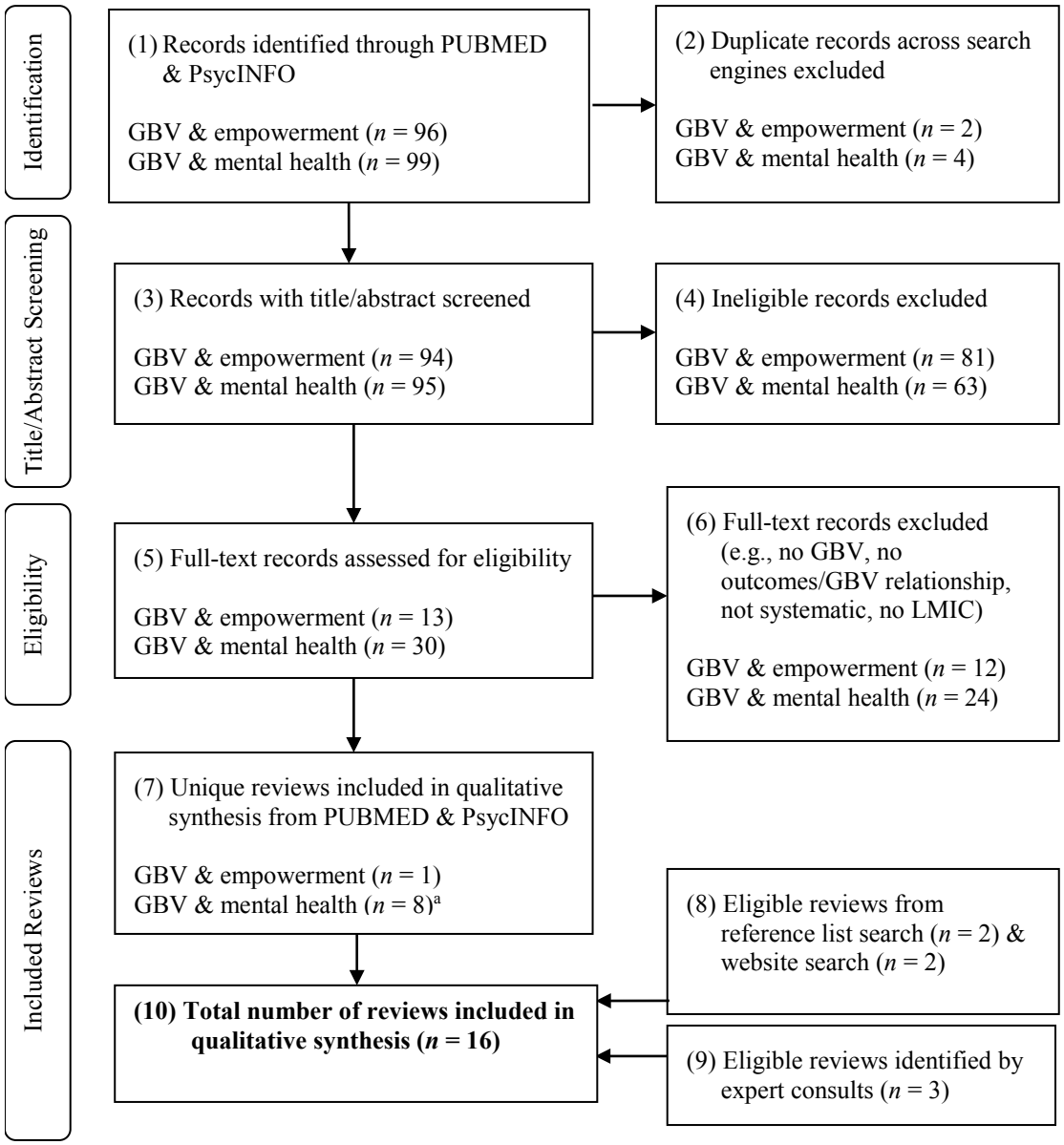
Two authors extracted review-level data from reviews, duplicating extractions from a subset of reviews to ensure extraction reliability. Three authors extracted data only from the original studies that were relevant to the aims of this review of reviews. Studies must have met the same age, gender, exposure, outcome, and language inclusion criteria as the reviews, although we did not restrict dates of publication.

Selection

Figure 1 summarizes the search, screening, review, and selection process. After excluding duplicate records identified across PubMed and PsycINFO searches, the titles and abstracts of 195 records were screened. After full-text review, nine unique reviews from the database search met eligibility criteria. Two reviews were obtained via the reference list search, two from relevant websites, and three from expert consultations (a list of included and excluded studies is available upon request).

Quality Assessment

Sixteen reviews met inclusion criteria and were rated for quality using AMSTAR. Scores ranged from 0 to 9 ($M = 3.75$) on the 11-point scale. Eleven reviews were of low quality (scored 0-4), four of moderate quality (scored 5-8), and one of high quality (scored 9-11; Online Supplement 3). All but



[a] One of these mental health reviews was found in the empowerment database search.

Figure 1. Flow Chart Showing the Search, Screening, and Selection Process.

one review used an *a priori* study design, and half provided information about the characteristics of all studies included in the review. Notably, none of the reviews contained the full list of included *and excluded* articles assessed in the review, although two reviews offered to make the list available upon request (Fry, McCoy, & Swales, 2012; Trevillion, Oram, Feder, & Howard, 2012). Similarly, none of the

reviews provided conflict-of-interest statements for all included studies as well as the review itself. Reviews scoring 4 and below were unique in that they generally did not assess, document, or use quality ratings of the included studies adequately, and only one included a publication's status as grey literature in its inclusion criteria. As such, we included only reviews scoring 5 and above on AMSTAR in our synthesis of study-level results. The only review to explicitly address empowerment outcomes scored a 3 on AMSTAR (Nasvytienė, Lazdauskas, & Leonavičienė, 2012). Two other reviews contained three studies assessing self-esteem, an empowerment-related outcome. Because so few reviews and studies analyzed empowerment and GBV, we synthesize below only the results for mental health.

Results

Review Characteristics

Characteristics of the sixteen included reviews are summarized in Table 1. With two exceptions (Walker, Logan, Jordan, & Campbell, 2004; Chen et al., 2010), all reviews were published between 2012 and 2016. Information could not be extracted from two reviews because they did not include a list of the reviewed studies (Mitchell, Wight, Van Heerden, & Rochat, 2016; Straube, Heinen, Ebinger, & von Kries, 2013). Allowing for instances of study duplication, 14 reviews with information yielded 575 studies (M = 41.07; range 10 to 124), of which 44% used data from LMICs (n = 252). LMIC geographic regions captured by reviews were Northern, Southern, Eastern, and Western Africa (n = 8), South-Eastern, Eastern, and Western Asia (n = 9), Latin America (n = 3), as well as Melanesia, Micronesia, and Polynesia (n = 1). No reviews were found with studies from Central Asia or the Caribbean. Of the LMIC-inclusive reviews, 73% of studies were written in English (n = 185); most non-English studies were in Chinese language variants. The proportion of English to non-English language studies across LMIC inclusive reviews ranged from 20% to 100% (M = 90%). Only 11% of all studies (n = 64) analyzed girls or women only or analyzed men's and women's data separately, and were in English.

AMSTAR (out of 11)	Review (1st author, yr)	Geographic Regions	*N* Studies	*n* LMICs	*n* English	*n* GW Analyzed	*n* GBV-MH Analyzed	*n* Adolescent Only	Age Range (years)	GBV	MH	Emp Outcomes
Moderate & High Quality												
9	Chen 2010	N Am, S Asia, Aus/Nzl, N Eur, W Eur,	37	1	1	1	1	0	18–50	IPV	Composite, SB	–
7	Norman 2012	S Afr, N Am, E Asia, SE Asia, W Asia, Aus/Nzl, W Eur	124	6	6	2	1	1	16–26	CM	Dep, SI, SU	–
7	Trevillion, 2012	E Afr, S Afr, C Am, N Am, S Am, S Asia, SE Asia, E Asia, W Asia, Aus/Nzl, N Eur, W Eur	35	10	9	9	9	0	≥14	CM, IPV, SV	Anx, Composite, Dep, PTSD, SB, SI, SU	–
6	Fry 2012	E Asia, SE Asia	19	11	8	3	3	3	12-25	CM, SV	Dep, ED, SB, SI, SU	SC/E
6	UNICEF 2012	S Afr, N Am, E Asia, SE Asia, Melanesia, Micronesia, Polynesia	102[2]	92	76	16	15	7	9–60	CM, IPV, SV	Anx, Composite, Dep, ED, PTSD, SB, SI, SU	SC/E
Subtotal			317	120	100	31	29	11				
Low Quality												
4	Fang 2015	E Asia	68	59	12	4	2	2	15-24	CM	Dep, SB, SI, SU	SC/E
4	Meinck 2015	N Afr, S Afr, W Afr	22	22	22	7	1	1	≥12	CM, SV	SB, SI, SU	–
4	Vu 2016	N Am, E Asia, Aus/Nzl, N Eur	74	1	1	0	0	0	–	CM	Unclear	–
3	Nasvytiene 2012	N Am, E Asia, N Eur	26	1	1	1	1	1	12–16	CM	SI	–
3	Semahegn 2015	E Afr	15	15	15	15	2	0	15-49	CM, IPV	Composite, Dep, SB, SI	–
2	Mitchell 2016[3]	–	–	–	–	–	–	–	–	IPV	Unclear	–
2	Foster 2015	E Afr, N Afr, S Afr, W Afr, N Am	20	20	20	1	1	1	14–21	CM	PTSD	–
1	Bitew 2014	E Afr	12	12	12	5	2	0	≥15	CM, IPV, SV	Dep	–
1	Straube 2013[3]	–	–	–	–	–	–	–	–	CM	Unclear	–
1	Verdolini 2015	S Afr, W Afr, N Am, SE Asia, Aus/Nzl, N Eur,	10	2	2	0	0	0	–	CM	Anx, Composite, Dep, PTSD, SB, SI, SU	–
0	Walker 2004	N Am, Aus/Nzl, N Eur	11	0	0	0	0	0	–	CM	PTSD	–
Subtotal			258	132	85	33	9	5				
Total Studies			**575**	**252**	**185**	**64**	**38**	**16**				

[1]Includes duplicates studies across reviews. Studies are counted once, even if they analyzed multiple samples.
[2]Total studies for UNICEF 2012 is the number of studies analyzing "consequences," and does not include prevalence studies.
[3]Mitchell et al. (2016) and Straube et al. (2013) did not provide a study list so it was not possible to extract characteristics.
COLUMNS: AMSTAR = AMSTAR quality assessment rating; range 0–11; low = 0–4, moderate = 5–8, high = 9–11. Regions = based on United Nations' geographic standards.

Studies = # of articles identified by review. LMICs = # of articles in review from low- or middle-income countries. English = # of LMIC articles written in English language. GW analyzed = # of English articles including separate analysis for girls or women. Exposure-outcome analyzed = examined relationships of interest to this review of reviews. Adolescent only = # of exposure-outcome analyzed articles separating empirical data by gender. Age range = the composite age range of women & girls (years) across exposure-outcome analyzed articles. MH outcomes = mental health outcomes. Emp Outcomes = Empowerment outcomes.
NOTE: Afr = Africa; Am = America; Anx = anxiety; Aus/Nzl = Australia and New Zealand; C = central; CM = child maltreatment; Composite = ≥2 MH conditions assessed together; Dep = depression; E = east; ED = eating disorder; Eur = Europe; FGMC = female genital mutilation/cutting; IPV = intimate partner violence; N = north; PTSD = Posttraumatic Stress Disorder; S = south; SB = suicidal behavior; SC/E = self-concept/self-esteem; SE = southeast; SI = suicidal ideation; SU = substance use; SV = non-partner sexual violence.

Table 1. Systematic Review Summary Characteristics[1]

Exposures and outcomes of interest to this review were found in 59% of the studies stratifying results by gender (7% of all studies). Ultimately, only 3% of all studies examined our exposures and outcomes with samples of only adolescent girls and young women in LMICs.

The five moderate- and high-quality reviews contained over half of all studies (n = 317). The number of studies ranged from 19 to 124 (M = 54) across the five reviews. However, the percentage of studies conducted in LMICs was low (21%, n = 120), as was the percentage of studies that assessed girls' and women's experiences in LMICs (6%, n = 31). Only 2% (n = 11) included samples of only adolescent girls and young women.

Although our initial aim was to synthesize evidence using adolescent-only samples, too few reviews were conducted with this group to perform a comprehensive review of only adolescent girls and young women in LMICs. Thus, we widened the scope to synthesize results from studies that included any respondents in adolescence and young adulthood, in addition to adult women. Doing so expanded the observed age range of women (9-60 years) and allowed for three additional medium and high-quality reviews and 14 additional unique studies.

In terms of exposure and outcomes, no reviews assessed FGMC or child marriage in relation to mental health (or empowerment) outcomes. Compared to the low-quality reviews, the moderate and high-quality reviews were more likely to address IPV (60% vs. 27%) and sexual violence (60% vs. 18%), but slightly less likely to address child maltreatment (80% vs. 91%). Higher quality reviews were more likely to address the outcomes of interest, including mental health composites (60% vs. 18%), depressive symptoms (80% vs. 36%), anxiety symptoms (40% vs. 9%), suicidal ideation (80% vs. 46%), suicidal behavior (80% vs. 36%), PTSD (40% vs. 27%), eating disorder symptoms (40% vs. 0%), and substance use (80% vs. 27%). This difference in emphasis was found because low-quality reviews were more likely to address only one outcome at a time (64% vs. 0%) and to have unclear outcomes because they were not transparently categorized, or the original studies could not be extracted (27% vs. 0%).

Characteristics of Extracted Studies

After removing duplicates, 25 studies assessed GBV exposures and their consequences for adolescent girls and young women in LMICs from the moderate- and high-quality reviews (Table 2 and Online Supplement 4). Nearly all (96%) studies were cross-sectional with one exception. Six (24%) studies used convenience sampling, and the rest were probability-based samples.

	n	%		n	%
Year of publication			**Sample size**		
2000-2003	0	0	1-249	1	2.4
2004-2006	25	60.9	250-499	8	19.5
2007-2009	11	26.8	500-999	9	21.9
2010-2012	5	12.3	1,000-1,499	16	41.5
2013-2016	0	0	1,500-1,999	5	12.3
Region			2000+	2	4.8
Africa-East	4	9.9	**Age range, adolescent-only**	8	19.5
Africa-Northern	1	2.4	9-18	1	2.4
Africa-Southern	4	9.9	12-18	1	2.4
Latin America	7	17.0	16-23	1	2.4
Asia-East	6	14.6	16-24	1	2.4
Asia-South	7	17.1	16-26	1	2.4
Asia-Southeast	9	21.9	17-19	1	2.4
Asia-West	1	2.4	18-25	1	2.4
Europe-Southern	1	2.4	Unknown[1]	1	2.4
Polynesia	1	2.4	**Age range adolescent/adult**		
Urbanicity			14+	1	2.4
Urban	26	63.5	15-49	21	51.6
Rural	9	21.9	17-60	1	2.4
Both	6	14.6	17-65	1	2.4
Marital status			18-50	1	2.4
Unmarried	2	4.8	18-59	1	2.4
Ever married/partnered	31	75.7	18-65+	1	2.4
Married/Unmarried	1	2.4	18-92	1	2.4
Unknown	7	17.1	20-64	1	2.4
Study design			20+	1	2.4
Cross-sectional	39	95.2	Unknown[1]	3	7.3
Longitudinal/Cross-Sectional	1	2.4	**Special sample[2]**		
Case-control	1	2.4	Clinical	3	7.3
Randomization			Parents	7	17.1
Convenience	6	14.6	Students	6	14.6
Multistage Probability	35	85.4			

[1]Provided mean or median age only.
[2]Do not add up to 100%

Table 2. Summary of Sample Characteristics (41 samples across 25 studies)

Three studies (12%) used clinical samples, while the rest used community- or population-based samples.

From these 25 studies, 41[1] unique samples were analyzed (Table 2). Data from WHO (2005) were extracted as 14 separate samples. Six samples using the same data were counted only once (Jeyaseelan et al. 2004; Ramiro, Hassan, & Peedicayil, 2004; Vizcarra et al. 2004). Most samples were from studies published between 2004-2006 (61%) or 2007-2009 (27%). The samples were concentrated in Asia (56%) followed by Africa (22%) and Latin America (17%). Over half (63%) of the samples used urban sites/participants, while the remainder drew from rural (22%) or mixed urban/rural populations (15%). Sample sizes ranged from 76 to 2,261, with over half (54%) sampling between 1,000-1,999 participants. Overall, 76% of the samples reported data from married/partnered adolescent girls and women. Within the combined adolescent/adult samples, 95% were of ever married/partnered women. In adolescent-only samples, 25% were of unmarried girls and young women, and 75% were of unknown marital status. Overall, 15% were student samples (75% of adolescent-only samples and 0% of adolescent/adult combined samples). This review revealed a shortage of research that was longitudinal, from regions outside of Asia and Africa, conducted with rural samples, inclusive of unmarried participants, or focused exclusively on adolescent girls and young women.

Synthesis of Mental Health Results

Table 3 presents a high-level summary of the GBV exposures and mental health outcomes addressed in the reviews and empirical studies (see Online Supplement 5 for results by study). For each outcome-exposure combination the number of *reviews* and *samples* is presented. In addition, we present the proportion of significant, positive associations found in the 52 unique analyses conducted on combinations of exposures-outcomes; no significant negative associations were found. Positive associations indicate relationships in which the GBV exposure was associated with a greater likelihood of mental health concerns. For the results summary below, standard terminology is used to refer to mental health conditions assessed as symptoms or using diagnostic instruments. Although some studies used diagnostic language, the comparability of diagnostic cut-points is uncertain (measurement details are presented in Online Supplement 4)

	Exposures												
	CM							IPV				SV	
Outcomes	CSA	CSA-C	CSA-NC	EA	N	PA	WA	Phy	Psy	Sexual	2+		**Total**
Composite													
n reviews, *n* samples		1, 2	1, 1			2, 2	1, 1	3, 11	3, 9	1, 1	1, 1		3, 15
% positive results[1]		*100*	*0*			*0*	*0*	*67*	*83*	*50*	*100*		*67*
Depression													
n reviews, *n* samples	2, 2	4, 5	2, 1	2, 2	2, 2	2, 2	1, 1	2, 3	1, 1	1, 1	2, 16		4, 25
% positive results	*50*	*100*	*67*	*50*	*67*	*50*	*67*	67	*100*	*0*	*100*		*81*
Anxiety													
n reviews, *n* samples	1, 1	1, 1	2, 2	1, 1	1, 1	1, 1		1, 1					2, 3
% positive results	*0*	*0*	*50*	*100*	*0*	*100*		*100*					*56*
Suicidal ideation													
n reviews, *n* samples				1, 1	2, 1	2, 1		1, 1			1, 15		3, 18
% positive results				*0*	*50*	*0*		*0*			*87*		*70*
Suicidal behavior													
n reviews, *n* samples		2, 2						2, 6	2, 3	1, 1	1, 13		3, 21
% positive results		*100*						*71*	*50*	*100*	*77*		*75*
PTSD													
n reviews, *n* samples		1, 1	2, 2			1, 1		1, 1			1, 3	1, 2	2, 5
% positive results		*50*	*0*			*0*		*100*			*100*	67	*58*
Eating disorder Sx													
n reviews, *n* samples		2, 1											2, 1
% positive results		*67*											*67*
Substance use													
n reviews, *n* samples	1, 1	2, 2	3, 2	1, 1	1, 1	1, 1		2, 2					4, 6
% positive results	*50*	*83*	*33*	*0*	*50*	*0*		*33*					*50*
Total													
n reviews, *n* samples	2, 3	3, 6	3, 8	2, 2	3, 3	4, 6	1, 2	3, 14	3, 10	2, 3	2, 20	1, 2	5, 41
% positive	*40*	*83*	*36*	*40*	*50*	*22*	*50*	*66*	*76*	*60*	*90*	*67*	*69*

1. No significant, negative associations were reported.

NOTE: Shaded cells denote combinations analyzed in three or more samples. CM = child maltreatment, CSA = child sexual abuse, CSA-C = child sexual abuse with physical contact, CSA-NC = child sexual abuse without physical contact, EA = Emotional abuse, N = neglect, PA = physical abuse, WA = witnessing parental abuse, Phy = physical IPV, Psy = psychological IPV, 2+ = two or more forms of IPV, SV = non-partner sexual violence, Sx = symptoms

Table 3. Summary of Mental Health Results by Outcome and Exposure

The systematic reviews addressed only 48% of the possible exposure-outcome combinations (excluding empowerment, FGMC, and child marriage). Most combinations were examined only in one or two samples. Only four combinations of exposure-outcome were studied with 10 or more samples: two or more types of IPV with depression, suicidal ideation, and suicidal behavior, and physical IPV with composite measures of mental health. The largest number of reviews addressed physical child abuse (Fry, McCoy, & Swales, 2012; Norman et al., 2012; Trevillion, Oram, Feder, & Howard, 2012; UNICEF, 2012), while only one review each addressed sexual violence (Trevillion et al., 2012) and witnessing parental abuse (UNICEF, 2012). The largest number of reviews addressed depression and substance use outcomes (Fry et al., 2012; Norman et al., 2012; Trevillion et al., 2012; UNICEF, 2012), while the fewest reviews addressed anxiety, PTSD (Trevillion et al., 2012; UNICEF, 2012), and symptoms of eating disorders (Fry et al., 2012; UNICEF, 2012).

Results for several exposure-outcome combinations stand out because they were analyzed in many samples and revealed a high proportion of significant, positive associations. Two or more forms of IPV were associated with symptoms of depression (100% positive associations), suicidal ideation (87% positive associations), and suicidal behavior (77% positive associations). Mental health composite measures were associated with the physical IPV (67% positive associations) and psychological IPV (83% positive associations). Below results for each mental health outcome are summarized.

Composite measures of mental health conditions. Composite measures of mental health conditions were measured using an index of symptoms or a diagnosis of a range of conditions. The relationship between child maltreatment and mental health composites was equivocal. Mental health problems were positively associated with child sexual abuse (CSA) involving physical contact in two studies with adolescent-only samples (Fahrudin & Edward, 2009; Sun et al., 2008), but not with other forms of child maltreatment (Fisher, Tran, Kriitmaa, Rosenthal, & Tran, 2010; Kyu & Kanai, 2005).

Most studies with combined adolescent/adult samples assessing IPV and mental health composites also found positive associations. IPV studies tended to focus on physical IPV, and 66% found it was related to a higher likelihood of mental health problems (Chowdhary & Patel, 2008; Jeyaseelan et

al., 2004; Vizcarra et al., 2004). The majority (76%) of studies examining psychological IPV also found a positive relationship (Ayub et al., 2009; Chowdhary & Patel, 2008; Ramiro et al., 2004; Vizcarra et al., 2004). When assessed together, physical IPV, psychological IPV, or both, were associated with mental health problems (Fisher et al., 2010). Sexual IPV was associated with mental health composites in 50% of cases: it was associated in a cross-sectional analysis but not a longitudinal analysis (Chowdhary & Patel, 2008). No adolescent-only samples examined the relationship between IPV and composites of mental health conditions.

Depressive symptoms. Overall, experiencing child maltreatment and IPV was positively associated with experiencing symptoms of depression. Child maltreatment and depression were examined with adolescent-only samples, with two exceptions (Deyessa et al., 2009; Luo, Parish, & Laumann, 2008). The majority (88%) of the studies assessing child maltreatment and depression focused on CSA. CSA involving physical contact was related to higher rates of depressive symptoms in five studies (Chen, Dunne, & Han, 2004, 2006; Fahrudin & Edward, 2009; Jewkes et al., 2010; Luo et al., 2008). Non-contact CSA showed a mixture of positive and null results for depression (Chen et al., 2004, 2006; Deyessa et al., 2009; Nguyen, Dunne, & Le, 2009). Similarly, emotional abuse, emotional and physical neglect, and physical abuse all showed mixed results, as positive associations with depressive symptoms were found in half of the analyses (Jewkes et al., 2010; Nguyen et al., 2009). Witnessing parental abuse also was positively related to depression (Hindin & Gultiano, 2006). Studies of IPV largely found that experiencing it was positively associated with depressive symptoms (Deyessa et al., 2009; Gass, Stein, Williams, & Seedat, 2011; Vung, Ostergren, & Krantz, 2009; WHO, 2005; Wong & Phillips, 2009). Notably, a positive relationship was found across all urban and rural samples examined in the WHO 2005 multi-country study. None of the studies exploring IPV and depression were conducted with adolescent-only samples.

Anxiety symptoms. Results for the relationship between GBV and anxiety symptoms were mixed. In adolescent-only samples, emotional and physical abuse in childhood were positively associated with symptoms of anxiety (Nguyen et al., 2009), but anxiety symptoms were not related to childhood

neglect (Nguyen et al., 2009), CSA involving physical contact (Fahrudin & Edward, 2009), or a combination of contact and non-contact CSA (Nguyen et al., 2009). The single study examining physical IPV and anxiety found a positive association with onset of anxiety symptoms before age 20 and a diagnosis of anxiety after age 20 in a combined sample of adolescents and adults (Gass et al., 2011).

Suicidal ideation. In most samples (70%), GBV was positively related to suicidal ideation. The three studies that explored child maltreatment and suicidal thoughts with adolescent-only samples found a mix of positive and null results (Chen et al. 2004, 2006; Jewkes et al., 2010). Regarding adult exposures, a combination of physical and sexual IPV was consistently, positively associated with suicidal ideation in all but two of the WHO (2005) samples (Ethiopia and rural Brazil). However, physical IPV assessed alone was not associated with suicidal thoughts in a clinical sample of women who had reported suicidal behavior (Wong & Phillips, 2009).

Suicidal behavior. Suicidal behavior typically was measured with yes/no questions asking whether the respondent had attempted to end her life or made a serious plan to do so. A consistent, positive relationship was found between experiencing CSA involving physical contact and suicidal behavior for adolescent-only samples, whereas mixed results were found for non-contact CSA (Chen et al. 2004, 2006). Overall, results indicated a largely uniform positive relationship (70%) between IPV and suicidal behavior across diverse rural and urban samples (Chowdhary & Patel, 2008; Vizcarra et al., 2004; WHO, 2005). Notably, longitudinal analyses for physical and sexual IPV supported the cross-sectional relationship between IPV and suicide (Chowdhary & Patel, 2008). No adolescent-only studies explored the relationship between IPV and suicidal behavior.

PTSD symptoms. Two studies examined childhood GBV exposures and PTSD symptoms. In an adolescent-only sample, Fahrudin and Edward (2009) found that CSA with physical contact was positively associated with dissociative symptoms, but not with a more comprehensive measure PTSD. Similarly, physical child maltreatment was not associated significantly with PTSD symptoms in a combined adolescent/adult sample (Kaminer, Grimsrud, Myer, Stein, & Williams, 2008). Three studies with adolescent/adult samples found positive associations between PTSD symptoms and exposure to any

IPV (Contreras-Pezzotti, Arteaga-Medina, Latorre, Folino, & Campo-Arias, 2010), physical IPV (Kaminer et al., 2008), and physical and/or sexual IPV combined (Yasan, Saka, Ozkan, & Ertem, 2009). Rape by a non-partner also was associated with PTSD, although other forms of sexual violence like molestation were not (Kaminer et al., 2008). When compared to physical violence, non-partner sexual violence was more strongly associated with PTSD (Baker et al. 2005). Overall, the evidence showed childhood exposures were unrelated to most PTSD symptoms, and that IPV and non-partner sexual violence were consistently related to PTSD for combined adolescent/adult samples.

Eating disorder symptoms. One study with an adolescent-only sample found a positive association between CSA (contact and non-contact) and two out of three indicators of problematic eating (Chen et al., 2004). No other GBV exposures were examined in relation to eating disorder symptomatology.

Substance use. Three studies found no robust relationship between child maltreatment and substance use in adolescent-only samples (Chen et al., 2004, 2006; Niu, Lou, Gao, Zuo, & Shah, 2010). One combined adolescent/adult study also found no relationship between physical IPV and a substance abuse diagnosis (Wong & Phillips, 2009). However, a consistent, positive relationship emerged between alcohol use and CSA for adolescent-only samples (Chen et al., 2004, 2006; Jewkes et al. 2010; see Niu et al., 2010 for an exception). Emotional neglect also was positively related to alcohol use, but null relationships were found for emotional abuse, physical neglect, and physical abuse (Jewkes et al., 2010). One adolescent/adult study found a relationship between physical IPV and alcohol use after age 20 (Gass et al., 2011). Overall, GBV was unrelated to drug use, and mixed results were found for alcohol use.

Discussion

This systematic review of reviews provides the first synthesis of the evidence included in the highest-quality systematic reviews about the mental health outcomes of GBV against adolescent girls and young women in LMICs. Published between 2010 and 2016, the synthesized reviews reflect a relatively nascent literature. Our review confirmed a consistent relationship between GBV and mental health across multiple exposures and outcomes, and provides an instructive roadmap for future research. We set out to

review five common forms of GBV against girls and women: child maltreatment, FGMC, child marriage, IPV, and non-partner sexual violence. Although few reviews were of moderate- to high-quality, our review showed that exposure to GBV was related to increased risk for depression, suicidal ideation, suicidal behavior, and overall poorer mental health among women in LMICs. We can conclude tentatively that GBV has detrimental consequences for the health and well-being of adolescent girls and young women in LMICs. This study is an important contribution, suggesting that evidence from Western contexts indicating a relationship between GBV and mental health is, in many ways, consistent with data from LMICs. We close with a discussion of the scope of the reviews and their contained studies, and highlight implications and areas for future research.

Review and Study Characteristics

Although we initially aimed to assess the body of evidence on GBV-related outcomes for adolescents, we found too few reviews focusing exclusively on this age group. Therefore, we included reviews and studies addressing a combination of adolescent, young adult, and adult women. As such, our review is somewhat limited in its capacity to provide a nuanced understanding of the developmentally specific consequences of GBV for adolescents. However, the results from the few analyses with adolescent-only samples were consistent with the results from research that included adult women.

There were several other gaps of note in the literature. The findings synthesized here were especially narrow in geographic scope. Most studies were conducted in Africa and Asia. There also was an overwhelming emphasis on cross-sectional research. Furthermore, far fewer samples were from rural areas than from urban centers. In addition, most adolescent-only studies sampled students, likely due to the relative ease of school-based recruitment. Thus, the experiences of non-student adolescents are largely absent. Some non-students may have been included, as student status generally was not reported for combined samples. Whereas married individuals were recruited predominantly in combined samples, no studies investigated GBV with married adolescents assessed separately from married adults. Finally, the research synthesized in this review focused only on IPV and sexual violence against adolescent girls and young women perpetrated *by men*, although marital status and sexual orientation were not consistently

reported. Given the stigma and illegality of same-sex relationships in many countries, it is not surprising that researchers recruited married individuals or did not ask about sexual identity. The results presented may not apply to lesbian, gay, bisexual, transgender, and queer youth, although research indicates these populations experience GBV at equal or greater levels than their heterosexual peers (Baker, Buick, Kim, Moniz, & Nava, 2013; Murray, Mobley, Buford, & Seaman-DeJohn, 2007).

Synthesizing the research on GBV and mental health in LMICs also was complicated by substantial variation in the way that exposures and outcomes were measured. Although many studies used empirically validated instruments, some used author-constructed measures that have not been previously validated. Composite measures of mental illness were represented heavily, but assessed between two and ten disorders at a time. Although composite inventories are convenient and capture co-morbidity of mental health conditions, they have limited ability to capture the unique characteristics and challenges of individual disorders or to inform policies or intervention strategies targeting specific outcomes.

Scope of GBV Exposures

This study provided evidence that several forms of GBV have a significant impact on mental well-being. A combination of two or more forms of IPV, physical IPV, and psychological IPV were studied most often, and found to be consistently related to mental health outcomes. We found less research on GBV exposures during childhood. This gap may be related to the shortage of studies that focused exclusively on adolescent girls and young women.

Notably, no systematic reviews were found for FGMC and child marriage. This is a significant gap in the literature. Research with especially vulnerable populations experiencing these two forms of violence is likely more difficult to conduct than research with adults, yielding less research for FGMC and child marriage as exposures overall. However, the oversight of FGMC and child marriage, two common forms of GBV in LMICs, may also be indicative of a Western bias in this area of research. This paucity is worrisome because evidence suggests girls in early marriages are more likely to experience physical and sexual IPV than girls married later in life (Santhya et al., 2010).

The psychological implications of the compounded trauma of poly-victimization appear to be underexplored in LMICs. There is some evidence that an individual who experiences multiple types of GBV over the life-course and across different social contexts would suffer from even more adverse mental health outcomes (e.g., Finkelhor et al., 2011; Lagdon et al., 2014). In some contexts, by the time a woman is 24-years-old she may have already experienced FGMC, child maltreatment, child marriage, and one or more forms of IPV. Yet, the literature did not examine outcomes of co-occurring and cumulative victimization. Additional research is essential in this area because outcomes of poly-victimization may differ from those of acute or one-time exposures. A greater understanding of the impact of poly-victimization in the context of LMICs would help improve interventions not only in childhood and young adulthood, but across the entire life-course.

Scope of Mental Health and Empowerment Outcomes

A significant contribution of our systematic review of reviews is that we identify outcomes currently neglected in the larger body of research. Although the UN and other international agencies have discussed the importance of empowerment to combat global GBV, this review of reviews found so little research with adolescent girls and young women in LMICs that we could not synthesize the results. Empowerment processes must be conceptualized and assessed contextually, based on the experiences of marginalized groups. However, research on adolescent girls and young women in LMICs appears not to have incorporated the global empowerment rhetoric. This gap is troubling, considering evidence that GBV may reduce girls' and women's negotiating and decision-making power, freedom of movement, and control within relationships (Grose & Grabe, 2014; Santhya et al., 2010). A recent review of child-marriage prevention showed that programs had the greatest impact when they enhanced girls' knowledge, skills, self-efficacy, aspirations, mobility, voice, influence over decisions, and collective agency (Lee-Rife, Malhotra, Warner, & Glinski, 2012), which suggests prevention efforts would benefit from an empowerment framework. A systematic review of GBV and empowerment would be a useful next step to understand girls' and young women's psychological well-being and ensure their full participation in societies where rates of violence are high.

The results indicated that certain mental health outcomes of GBV have been privileged in research within LMICs among adolescent girls and young women. There was limited research on the relationship between GBV and anxiety, PTSD, eating disorders, and substance use, suggesting that it may be premature to draw conclusions about the relationship between GBV and these outcomes for adolescent girls and young women in LMICs. Several explanations for this gap may apply. Researchers may not consider these to be salient outcomes of GBV in LMICs. For instance, eating disorder symptoms may not be seen as relevant in contexts characterized by high poverty or food insecurity.

Similarly, certain mental health outcomes may not have been assessed because they are not well-defined or understood in the LMICs captured in this review of reviews. Although mental health is coming into focus globally, local understandings shape the experience, classification, and measurement of mental illnesses, which may inform a research interest in certain outcomes over others (Watters, 2010). As such, conceptualization and measurement of GBV and mental health may differ across countries and cultural contexts. GBV and mental illness are often stigmatized subjects, especially in certain Asian countries like China and Vietnam (Ng, 1997; Watters, 2010). Trauma symptoms may manifest differently across contexts and individuals may adapt differently to chronically high-stress environments. In addition, stigmatization may result in underreporting because of fear or shame. It is important to consider potential cultural differences when planning research and interventions with vulnerable populations in LMICs.

One possible reason for limited research on substance use, in particular, is that the perceived risk by participants of disclosing illegal or taboo activities may inhibit reporting, to the detriment of subsequent analyses. Underreporting may be especially likely with underage populations. Gender stereotypes may also exacerbate stigma related to substance use by adolescent girls and young women, informing both researchers' aims and participants' willingness to disclose their behaviors. Underreporting may also result if participants perceived that risks of disclosure were high; studies were not always explicit about how they handled confidentiality or adverse events. Efforts to implement the UN's Goal 3 to improve mental health and prevent substance use with adolescent girls and young women in LMICs will require increased research in this area and thoughtful treatment of context.

Review Limitations

The review procedure used for the present study is not without limitations. The authors examined only reviews and studies written in English. Non-English studies from the English reviews tended to be written in Chinese-language variants, so our findings likely underrepresent the experiences of Chinese adolescent girls and young women. We extracted reviews from two electronic databases (PubMed and PsycINFO) and complemented the search with systematic expert consultation and web searches. While the selected databases were expansive, and our efforts were consistent with other systematic reviews of reviews, our analysis may have missed reviews not located within these resources. This review may be limited because results were synthesized from studies within systematic reviews that were AMSTAR rated moderate or high quality. The review process in conjunction with application of the AMSTAR assessment tool also yielded an imbalance of study source. In particular, many of the studies were extracted from the 2012 UNICEF review, and 14 of the 41 samples were extracted from the 2005 WHO multi-country study. Additionally, some large studies were reported in series of papers reporting distinct analyses using the same samples from four countries (Jeyaseelan et al., 2004; Ramiro et al., 2004; Vizcarra et al., 2004). Reliance on these groups of related studies should be considered when interpreting the results and their implications.

This review of reviews did not attempt to address the impact of experiencing GBV on the mental health of adolescent boys and young men in LMICs. Experiencing gendered forms of violence and assault may have different outcomes for boys and young men, and a separate review of the literature is warranted. Understanding the impact of GBV on boys and men will serve the goal of achieving gender equality, to the extent that boys' and men's perpetration of GBV against women and girls is related to their own psychological well-being (Yount, James-Hawkins, et al., 2016).

Implications for Research and Practice

This review of reviews revealed a need for increased support for research in LMICs. More research is necessary to confirm whether GBV has similar consequences for adolescent girls, young women, and adult women, or whether the outcomes of violence differ based on timing in the life-course,

time elapsed since exposure, or severity. We recommend that future reviews on GBV and mental health and empowerment highlight adolescent-specific research. To develop evidence-based, age-appropriate interventions, research must address the unique experience of adolescent girls and young women, apart from their older adult counterparts. Longitudinal research would help fill this need, as all studies in this review were cross-sectional except one. While GBV exposures may affect mental health outcomes, a reciprocal relationship also may exist and other causal factors, such as limited access to resources, may influence both GBV exposures and outcomes. Such research would help stakeholders develop targeted interventions and create policy that considers the temporal relationship between these phenomena.

This review highlighted several specific gaps in the research, including an absence of reviews addressing the mental health outcomes of FGMC and child marriage and limited research on anxiety, PTSD, eating disorders and substance use. In addition, this review found that the literature on GBV against women and mental health is constrained by variations in the quality and content of outcome measurements. Future research would benefit from the adoption of standardized research protocols and measures of GBV and related outcomes. Such standardization must include a shift away from catch-all measurements if the aim is to inform interventions that can best serve vulnerable populations. While it is essential that assessments are rooted in local cultures and contexts, a broader conversation is needed regarding assessment standardization and best practices for measuring mental health to meaningfully advance the UN's Agenda for Sustainable Development Goals. A better understanding of adolescent girls' and young women's vulnerabilities and resilience would assist with the creation of context-specific solutions to address the dual goals of eliminating violence and promoting mental health.

The results presented here have important implications for efforts to foster mental health for adolescent girls and young women in LMICs. At a minimum, mental health advocates and practitioners working with vulnerable youth in LMICs must consider the community and relationship context during diagnosis and treatment. Yet, it will not be enough to treat symptoms of mental health through clinical practice without also implementing community-level interventions aimed at eradicating GBV against women and girls. Interventions targeting early adolescent girls in LMICs are potentially well-positioned

to buffer or prevent negative mental health sequelae. Such efforts must recognize that many girls have already been exposed to multiple, often co-occurring, forms of GBV. A recent review of reviews on GBV interventions for adolescent girls and young women in LMICs suggested that social resource investments, community engagement, and community infrastructure interventions are especially important for these age groups (Yount et al., 2017). Access to important resources is essential, because gender inequality and GBV occur alongside other structural risk factors such as poverty, racism, and state conflict. Involving boys and men as allies in primary prevention efforts is also necessary to alter social norms and redress the structural causes underlying the tolerance of violence and the subordination of girls and women. Although the barriers to adolescent girls' and young women's full participation in society differ across contexts, improving their mental health will require community-based efforts to introduce structural changes and new norms that proscribe and sanction GBV against girls and women.

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*Denotes a systematic review included in this study.

+Denotes an original study included in the data extraction.

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Online Supplement 1.

[Author names and affiliations masked]

Mental Health, Empowerment, and Violence Against Young Women in Lower-Income Countries: A Review of Reviews. *Aggression and Violent Behavior.*

Search Strings and Search Results for PUBMED and PsycINFO Searches

			References Identified	
	Search Step	**Search String**	PubMed	PsycINFO
	Restrict to English, Human Subjects			
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 "child abuse, sexual" OR "circumcision, female" [MeSH Terms]) OR ("spousal violence" OR "spouse violence" OR "relationship violence" OR "relational violence" OR "relationship aggression" OR "relational aggression" OR "couple violence" OR "psychological violence" OR "psychological abuse" OR "emotional violence" OR "emotional abuse" OR "marital aggression" OR "marital abuse" OR "marital violence" OR "family conflict" OR "marital conflict" OR "wife beating" OR "intimate terrorism" OR "partner abuse" OR "battered female" OR "battered females" OR "marital rape" OR "spousal rape" OR "Sex abuse" OR "sex offenses" OR "sexual assault" OR "sex assault" OR "Violence against children" OR "Child rape" OR "child sexual assault" OR ("circumcision" AND "human females") OR ("mutilation" AND "human females") OR "genital mutilation" OR "female genital cutting" OR "female genital mutilation" OR "gender based violence" OR "child marriage" OR "early marriage" [All Fields]) **PsycINFO:** "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 "child abuse, sexual" OR "circumcision, female" OR OR "spousal violence" OR "spouse violence" OR "relationship violence" OR "relational violence" OR "relationship aggression" OR "relational aggression" OR "couple violence" OR "psychological violence" OR "psychological abuse" OR "emotional violence" OR "emotional abuse" OR "marital aggression" OR "marital abuse" OR "marital violence" OR "family conflict" OR "marital conflict" OR "wife beating" OR "intimate terrorism" OR "partner abuse" OR "battered female" OR "battered females" OR "marital rape" OR "spousal rape" OR "Sex abuse" OR "sex offense*" OR "sexual assault" OR "sex assault" OR "Violence against children" OR "Child rape" OR "child sexual assault" OR ("circumcision" AND "human females") OR ("mutilation" AND "human females") OR "genital mutilation" OR "female genital cutting" OR "female genital mutilation" OR "gender based violence" OR "child marriage" OR "early marriage" OR OR Atrocities OR "Assaultive Behavior" OR "Behavior, Assaultive" OR "Abuse, Spouse" OR "Spousal Abuse" OR "Abuse, Spousal" OR "Partner Abuse" OR "Abuse, Partner" OR "Wife Abuse" OR "Abuse, Wife" OR "Violence, Domestic" OR "Family Violence" OR "Violence, Family" OR "Abuse, Physical" OR "Physical Violence" OR "Violence, Physical" OR "Physical Maltreatment" OR "Maltreatment, Physical" OR "Partner Violence, Intimate" OR "Violence, Intimate Partner" OR "Intimate Partner Abuse" OR "Abuse, Intimate Partner" OR "Partner Abuse, Intimate" OR "Dating Violence" OR "Violence, Dating" OR "Woman, 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" OR "Molestation, Sexual Child" OR "Sexual Child Molestation" OR "Sexual Abuse, Child" OR "Abuse, Child Sexual" OR "Child Sexual Abuse" OR "Sexual Abuse of Child" OR "Circumcisions, Female" OR "Female Circumcision*" OR "Infibulation*" OR "Clitoridectom*" OR "Clitorectom*" OR "Genital Mutilation, Female"	75,553	126,016

2	Mental health	**PubMed:** ("Mental health" OR "Mental disorders" OR "Anxiety disorders" OR "Panic disorders" OR "Phobic disorders" OR "stress disorders, traumatic" OR "battered child syndrome" OR "Trauma and Stressor Related Disorders" OR "Stress Disorders, Post-Traumatic" OR "Stress Disorders, Traumatic, Acute" OR "Stress, Psychological" OR "Depressive Disorder, Major" OR "depressive disorder" OR "depression" OR "Dysthymic Disorder" OR "bipolar disorders" OR "suicide" OR "suicidal ideation" OR "Suicide, Attempted" OR "Self-Injurious Behavior" OR "Substance-Related Disorders" OR "Substance-Related Disorders" OR "Alcohol-Related Disorders" OR "alcoholism" OR "Conduct Disorder" OR "Binge Eating Disorder" OR "bulimia" OR "Bulimia Nervosa" OR "Feeding and Eating Disorders" OR "Pica" OR "Feeding and Eating Disorders of Childhood" OR "anorexia" OR "Anorexia nervosa"[MeSH Terms]) OR (("mental illness" OR "mental illnesses" OR "generalized anxiety disorder" OR "anxiety" OR "anxious" OR "panic" OR "panics" OR "agoraphobia" OR "stress disorder" OR "stress disorders" OR "stress" OR "stresses" OR "mood disorders" OR "depressed" OR "bipolar" OR "suicidal thoughts" OR "suicidal thought" OR "self-harm" OR "self harm" or "self destructive behaviors" OR "self-destructive behavior" OR "drug use" OR "addiction" OR "addictions" OR "bulimic" OR "eating disorder" OR "eating disorders" OR "disordered eating" OR "problematic eating" OR "problematic eating behavior" OR "rumination" OR "anorexic" [All Fields]) **PsycINFO:** “Mental health” OR “Mental disorder*” OR “Anxiety disorder*” OR “Panic disorder*” OR “Phobic disorder*” OR “stress disorder*, traumatic” OR “battered child syndrome” OR “Trauma and Stressor Related Disorder*” OR “Stress Disorder*, Post-Traumatic” OR “Stress Disorder*, Traumatic, Acute” OR “Stress, Psychological” OR “Depressive Disorder, Major” OR “depressive disorder” OR “depression” OR “Dysthymic Disorder” OR “bipolar disorder*” OR “suicide” OR “suicidal ideation*” OR “Suicide*, Attempted” OR “Self-Injurious Behavior*” OR “Substance-Related Disorder*” OR “Alcohol-Related Disorder*” OR “alcoholism” OR “Conduct Disorder*” OR “Binge Eating Disorder*” OR “bulimia” OR “Bulimia Nervosa*” OR “Feeding and Eating Disorder*” OR “Pica” OR “Feeding and Eating Disorder* of Childhood” OR “anorexia*” OR “Anorexia nervosa*” OR OR “mental illness*” OR “generalized anxiety disorder” OR “anxiet*” OR “anxious” OR “panic*” OR “agoraphobia” OR “stress disorder*” OR “stress*” OR “mood disorders” OR “depressed” OR “bipolar” OR “suicidal thought*” OR “suicidal thinking” OR “self-harm” OR “self harm” or “self destructive behaviors” OR self-destructive behavior” OR “drug use” OR “addiction*” OR “bulimic” OR “eating disorder*” OR “disordered eating” OR “problematic eating” OR “problematic eating behavior*” OR “rumination” OR “anorexic” OR OR “Health, Mental” OR “Mental Hygiene” OR “Hygiene, Mental” OR “Disorder*, Mental” OR “Diagnosis, Psychiatric” OR “Psychiatric Diagnosis” OR “Behavior Disorders” OR “Disorders, Behavior” OR “Mental Disorder*, Severe” OR “Disorder*, Severe Mental” OR “Severe Mental Disorder*” OR “Disorder*, Anxiety” OR “Neuroses, Anxiety” OR “Anxiety Neuroses” OR “Anxiety State*, Neurotic” OR “Neurotic Anxiety State*” OR “State*, Neurotic Anxiety” OR “Disorder*, Panic” OR “Attack*, Panic” OR “Panic Attack*” OR “Disorder*, Phobic” OR “Phobic Neuroses” OR “Neuroses, Phobic” OR “Phobia*” OR “Phobia*, School” OR “School Phobia*” OR “Claustrophobia*” OR “Phobia*, Social” OR “Social Phobia*” OR “Traumatic Stress Disorder*” OR “Child Syndrome*, Battered” OR “Syndrome*, Battered Child” OR “Nonaccidental Trauma in Children” OR “Post-Traumatic Stress Disorder*” OR “Stress Disorder*, Post-Traumatic” OR “PTSD” OR “Neuroses, Posttraumatic” OR “Posttraumatic Neuroses” OR “Posttraumatic Stress Disorder*” OR “Stress Disorder*, Posttraumatic” OR “Neuroses, Post-Traumatic” OR “Neuroses, Post Traumatic” OR “Post-Traumatic Neuroses” OR “Post Traumatic Stress Disorders” OR “Chronic Post-Traumatic Stress Disorder” OR “Chronic Post Traumatic Stress Disorder” OR “Delayed Onset Post-Traumatic Stress Disorder” OR “Delayed Onset Post Traumatic Stress Disorder” OR “Acute Post-Traumatic Stress Disorder” OR “Acute Post Traumatic Stress Disorder” OR “Stress Disorder*, Traumatic, Acute” OR “Stress Disorder*, Acute” OR “Acute Stress Disorder*” OR “Stress*, Psychological” OR “Life Stress*” OR “Stress*, Life” OR “Stress, Psychologic” OR “Psychologic Stress” OR “Psychological Stress*” OR “Mental Suffering” OR “Suffering, Mental” OR “Suffering” OR “Anguish” OR “Emotional Stress” OR “Stress, Emotional” OR “Disorder*, Mood” OR “Affective Disorder*” OR “Disorder*, Affective” OR “Depressive Disorder*, Major” or “Disorder*, Major Depressive” OR “Major Depressive Disorder*”	1,011,328	941,439

		OR “Psychos*, Involutional” OR “Involutional Psychos*” OR “Paraphrenia*, Involutional” OR “Involutional Paraphrenia*” OR “Depression, Involutional” OR “Involutional Depression” OR “Melancholia, Involutional” OR “Involutional Melancholia” OR “Depressive Disorder*” OR “Disorder*, Depressive” OR “Neuros*, Depressive” OR “Depressive Neurosi*” OR “Depression*, Endogenous” OR “Endogenous Depression*” OR “Depressive Syndrome*” OR “Syndrome*, Depressive” OR “Depression*, Neurotic” OR “Neurotic Depression*” OR “Melancholia*” OR “Unipolar Depression*” OR “Depression*, Unipolar” OR “Disorder*, Dysthymic” OR “Dysthymic Disorder*” OR “Depressions” OR “Depressive Symptom*” OR “Symptom*, Depressive” OR “Emotional Depression*” OR “Depression*, Emotional” OR “Disorder, Bipolar” OR “Psychos*, Manic-Depressive” OR “Psychos*, Manic Depressive” OR “Manic-Depressive Psychos*” OR “Manic Depressive Psychosis” OR “Affective Psychosis, Bipolar” OR “Bipolar Affective Psychosis” OR “Psychos*, Bipolar Affective” OR “Mania*” OR “Manic State*” OR “State*, Manic” OR “Depression, Bipolar” OR “Bipolar Depression” OR “Manic Disorder*” OR “Disorder, Manic” OR “Ideation, Suicidal*” OR “attempted suicide*” OR “Behavior*, Self-Injurious” OR “Self Injurious Behavior” OR “Self-Injurious Behaviors” OR “Deliberate Self-Harm” OR “Deliberate Self Harm” OR “Self-Harm, Deliberate” OR “Self-Destructive Behavior*” OR “Behavior*, Self-Destructive” OR “Self Destructive Behavior” OR “Parasuicide*” OR “Drug Dependence” OR “Dependence, Drug” OR “Drug Addiction” OR “Addiction, Drug” OR “Drug Habituation” OR “Habituation, Drug” OR “Substance Use Disorders” OR “Disorder, Substance Use” OR “Substance Use Disorder” OR “Organic Mental Disorders, Substance-Induced” OR “Organic Mental Disorders, Substance Induced” OR “Substance Abuse*” OR “Abuse, Substance” OR “Abuses, Substance” OR “Substance Dependence” OR “Dependence, Substance” OR “Substance Addiction” OR “Addiction, Substance” OR “Drug Abuse” OR “Abuse, Drug” OR “Drug Use Disorder*” OR “Disorder, Drug Use” OR “Alcohol Related Disorder*” OR “Alcohol-Related Disorder*” OR “Disorder*, Alcohol-Related” OR “Alcohol Dependence” OR “Dependence, Alcohol” OR “Alcoholic Intoxication, Chronic” OR “Chronic Alcoholic Intoxication” OR “Intoxication, Chronic Alcoholic” OR “Alcohol Addiction” OR “Addiction, Alcohol” OR “Alcohol Abuse” OR “Abuse, Alcohol” OR “Binge-Eating Disorder*” OR “Disorder*, Binge-Eating” OR “Disorder*, Binge Eating” OR “Eating and Feeding Disorder*” OR “Appetite Disorder*” OR “Allotriophagy” OR “Geophagia” OR “Childhood Eating and Feeding Disorder*” OR “Rumination Disorder*” OR “Disorder*, Rumination” OR “Nervosa*, Anorexia” OR “Bulimias” OR “Binge Eating” OR “Eating, Binge” OR “Nervosa, Bulimia”		
3	Empowerment	**PubMed:** ((“Power (Psychology)” OR “Resilience, Psychological” OR “Self concept” OR “Self-efficacy” OR “Personal autonomy” OR “Aspirations (psychology)” OR “Internal-External Control” OR “Awareness” OR “Adaptation, Psychological” OR “Social participation” OR “Decision making” OR “Negotiating” [MeSH Terms]) OR (empower OR empowering OR empowered OR power-to OR “power to” OR power-within OR “power within” OR power-with OR “power with” OR resilient OR resilience OR resiliency OR self-confidence OR “self confidence” OR self-confident OR “self confident” OR self-awareness OR “self awareness” OR self-worth OR “self worth” OR self-esteem OR efficacy OR “self efficacy” OR efficacious OR autonomous OR independent OR independence OR agency OR agent OR agentic OR choice OR “freedom of movement” OR aspire OR aspires OR aspiration OR ”personal control” OR “perceived control” OR subjectivity OR voice OR “goal internalization” OR motivation OR motivations OR “motivation to control” OR entitlement OR entitle OR entitles OR “critical understanding” OR “critical consciousness” OR skills OR skill OR capacities OR capacity OR strengths OR competence OR competencies OR competency OR competent OR capabilities OR capable OR capability OR mastery OR withstanding OR withstand OR resist OR resisting OR resistance OR adapt OR adaptive OR adapting OR adaptable OR adaptability OR “adaptation” OR coping OR cope OR “stress management” OR participation OR “civic engagement” OR engagement OR “community involvement” OR “collective action” OR “collective actions” OR actions OR assertiveness OR assertive OR activism OR proactive OR decision-making OR problem-solving OR decision OR decisions OR bargain OR bargains OR bargaining OR subvert OR subversion OR resist OR resistance OR “joint decision-making” OR “joint decision making” OR negotiate OR “resource mobilization” OR appraisal OR appraisals OR reflection OR reflexivity OR reflexive Or reflections OR self-reflection OR “self reflection” [All Fields])	2,737,774	1,619,190

		PsycINFO: “Power (Psychology)” OR “Resilience, Psychological” OR “Self concept” OR “Self-efficacy” OR “Personal autonomy” OR “Aspirations (psychology)” OR “Internal-External Control” OR “Awareness” OR “Adaptation, Psychological” OR “Social participation” OR “Decision making” OR “Negotiating” OR Empower* OR power-to OR “power to” OR power-within OR “power within” OR power-with OR “power with” OR resilien* OR self-confiden* OR “self confiden*” OR self-awareness OR “self awareness” OR self-worth OR “self worth” OR self-esteem OR efficacy OR “self efficacy” OR efficacious OR autonomous OR independen* OR agency OR agent* OR choice OR “freedom of movement” OR aspire* OR aspiration OR ”personal control” OR “perceived control” OR subjectivity OR voice OR “goal internalization” OR motivation* OR “motivation to control” OR entitlement OR entitle* OR “critical understanding” OR “critical consciousness” OR skill* OR capacit* OR strength* OR competen* OR capable OR capabilit* OR mastery OR withstanding OR withstand OR resist* OR adapt* OR coping OR cope OR “stress management” OR participation OR “civic engagement” OR engagement OR “community involvement” OR “collective action*” OR actions OR assertiveness OR assertive OR activism OR proactive OR decision-making OR problem-solving OR decision* OR bargain* OR subvert OR subversion OR “joint decision-making” OR “joint decision making” OR negotiate OR “resource mobilization” OR appraisal* OR reflection* OR reflexive* OR self-reflection* OR “self reflection*” OR OR “Powers (Psychology)” OR “Power” OR “Power, Social” OR “Social Power” OR “Power, Professional” OR “Professional Power” OR “Empowerment” OR “Power, Personal” OR “Personal Power” OR “Psychological Resilience*” OR “Resiliences, Psychological” OR “Concept*, Self” OR “Self Concepts” OR “Self-Perception*” OR “Self Perception*” OR “Perception*, Self” OR “Self Esteem*” OR “Esteem*, Self” OR “Efficacy, self” OR “Autonomy, Personal” OR “Self Determination” OR “Free Will” OR “Aspiration (Psychology)” OR “Control*, Internal-External” OR “Internal External Control” OR “Internal-External Controls” OR “Locus of Control” OR “Control Locus” OR “Awarenesses” OR “Situational Awareness*” OR “Awareness*, Situational” OR “Situation Awareness*” OR “Awareness*, Situation” OR “Adaptation, Psychologic” OR “Psychologic Adaptation” OR “Psychological Adaptation” OR “Coping Behavior*” OR “Behavior*, Coping” OR “Coping Skill*” OR “Skill*, Coping” OR “Behavior*, Adaptive” OR “Adaptive Behavior*” OR “Participation, social” OR “Decision Making*, Shared” OR “Making*, Shared Decision” OR “Shared Decision Making*” OR “Negotiation*” OR “Mediation” OR “Mediating” OR “Arbitrating” OR “Arbitration” OR “Conflict Resolution*” OR “Resolution, Conflict”		
4		1 & 2 (MH)	28,760	56,063
5		1 & 3 (Emp)	16,455	61,790
10	Female only	PubMed: Female[MeSH Terms]; PsycINFO: Female	MH: 20,699 Emp: 16,455	MH: 56,063 Emp: 61,790
7	Ages 0-24	PubMed: child[MeSH] OR adolescent[MeSH]) OR young adult[MeSH] PsycINFO: Narrow by SubjectAge: childhood (birth-12 yrs), adolescence (13-17 yrs), young adulthood (18-29 yrs)	MH: 14,467 Emp: 11,053	MH: 23,719 Emp: 24,448
8	Since 2000	PubMed: "2000/01/01"[PDat] : "2016/12/31"[PDat]; PyscINFO: Limiters - Publication Year: 2000-2016	MH: 10,784 Emp: 8,384	MH: 18,247 Emp: 18,888
9	Reviews	PubMed: Meta-Analysis[ptyp] OR Review[ptyp] OR systematic[sb] PsycINFO: narrow by methodology "meta analysis" "systematic review"	MH: 580 Emp: 501	MH: 142 Emp: 142

11	Low- or Middle-Income Country	**PubMed:** (“Developing country” [MeSH Terms]) OR (“Developing country” OR “developing countries” OR “developing population” OR “developing populations” OR “less developed population” OR “less developed populations” OR “less developed world” OR “lesser developed county” OR “lesser developed countries” OR “lesser developed nation” OR “lesser developed nations” OR “lesser developed population” OR “lesser developed populations” OR “lesser developed world” OR “under developed country” OR “under developed nation” OR “under developed population” OR “under developed populations” OR under developed world” OR “underdeveloped country” OR “underdeveloped countries” OR “underdeveloped nation” OR “underdeveloped nations” OR underdeveloped population” OR “underdeveloped populations” OR “underdeveloped world” OR “middle income country” OR “middle income countries” OR “middle income nation” OR “middle income nations” OR “middle income population” OR “middle income populations” OR “low income country” OR “low income countries” OR “low income nation” OR “low income nations” OR “low income population” OR “low income populations” OR “lower income country” OR “lower income countries” OR “lower income nation” OR “lower income nations” OR “lower income population” OR “lower income populations” OR “underserved country” OR “underserved countries” OR “underserved nation” OR “underserved nations” OR “underserved population” OR “underserved populations” OR “underserved world” OR “under served country” OR “under served countries” OR “under served nation” OR “under served nations” OR “under served population” OR “under served populations” OR “under served world” OR “deprived country” OR “deprived countries” OR “deprived nation” OR “deprived nations” OR “deprived population” OR “deprived populations” OR “deprived world” OR “poor country” OR “poor countries” OR “poor nation” OR “poor nations” OR “poor population” OR “poor populations” OR “poor world” OR “developing economy” OR “developing economies” OR “less developed economy” OR “less developed economies” OR “lesser developed economy” OR “lesser developed economies” OR “under developed economy” OR “under developed economies” OR “underdeveloped economy” OR “underdeveloped economies” OR “middle income economy” OR “middle income economies” OR “low income economy” OR “low income economies” OR “lower income economy” OR “lower income economies” OR “low gdp” OR “low gnp” OR “lower gdp” OR “lmic” OR “lmics” OR “third world” OR “lami country” OR “lami countries” OR “transitional country” OR “transitional countries” 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”	MH: 75	MH: 24

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 “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 “Phillipines” 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”)

PsycINFO: “Developing countr*” OR 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”

Emp: 75 Emp: 21

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 “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 “Phillipines” 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” OR OR “Countr*, Developing” OR “Least Developed Countr*” OR “Countr*, Least Developed” OR “Developed Countr*, Least” OR “Less-Developed Countr*” OR “Countr*, Less-Developed” OR “Less Developed Countr*” OR “Under-Developed Nation*” OR “Nation*, Under-Developed” OR “Under Developed Nation*” OR “Third-World Countr*” OR “Countr*, Third-World” OR “Third World Countr*” OR “Third-World Nation*” OR “Nation*, Third-World” OR “Third World Nation*” OR “Under-Developed Countr*” OR “Countr*, Under-Developed” OR “Under Developed Countr*” OR “Developing Nation*” OR “Nation*, Developing” OR “Less-Developed Nation*” OR “Less Developed Nation*” OR “Nation*, Less-Developed”

NOTE: In PsycINFO search was conducted in three ways: TX (All Text), SU (Subjects), and DE (Subjects [exact])

Online Supplement 2.

[Author names and affiliations masked]

Mental Health, Empowerment, and Violence Against Young Women in Lower-Income Countries: A Review of Reviews. *Aggression and Violent Behavior.*

List of Websites Searched for Grey Literature

1. Better Care Network, http://www.bettercarenetwork.org/, October 2016
2. Campbell Collaboration, https://www.campbellcollaboration.org/, October 2016
3. CARE, http://www.care.org/, October 2016
4. Child Rights International Network, https://www.crin.org/, October 2016
5. ECPAT International, http://www.ecpat.net, October 2016
6. Global Initiative to End Corporal Punishment, http://www.endcorporalpunishment.org/, October 2016
7. Library Addressing Child Trafficking, http://www.childtrafficking.com/, October 2016
8. Save the Children, http://www.savethechildren.org, October 2016
9. UN Women, http://www.unwomen.org, October 2016
10. UNICEF Innocenti Research Centre, http://childtrafficking.org/, October 2016
11. UNICEF, www.unicef-irc.org, October 2016
12. United Nations Population Fund, http://www.unfpa.org/, October 2016
13. WHO, http://www.who.int, October 2016

Online Supplement 3.
[Author names and affiliations masked]
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Details of AMSTAR quality assessment ratings and criteria

	Quality Assessment Criteria											
Review (Author, Date)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Overall Quality (out of 11)**
Low Quality (*n* = 11)												
Bitew, 2014	Y	N	N	N	N	N	N	N	N	N	N	1
Fang, 2015	Y	Y	Y	N	N	N	N	N	Y	N	N	4
Foster, 2015	Y	N	N	N	N	Y	N	N	-	-	N	2
Meinck, 2015	Y	N	Y	Y	N	Y	N	N	-	-	N	4
Mitchell, 2016	Y	N	Y	N	N	N	N	N	-	-	N	2
Nasvytienė, 2012	Y	Y	N	N	N	N	N	N	Y	N	N	3
Semahegn, 2015	Y	Y	N	N	N	Y	N	N	-	-	N	3
Straube, 2013	Y	N	N	N	N	N	N	N	-	-	N	1
Verdolini, 2015	Y	N	N	N	N	N	N	N	-	-	N	1
Vu, 2016	Y	Y	N	N	N	N	N	N	Y	Y	N	4
Walker, 2004	N	N	N	N	N	N	N	N	-	-	N	0
Moderate Quality (*n* = 4)												
Fry, 2012	Y	N	Y	Y	Y	Y	Y	N	-	-	N	6
Norman, 2012	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	7
Trevillion, 2012	Y	Y	Y	N	Y	Y	Y	Y	-	-	N	7
UNICEF, 2012	Y	N	Y	Y	N	Y	Y	Y	-	-	N	6
High Quality (*n* = 1)												
Chen, 2010	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	9

Note. M-A = meta-analysis. low quality score = 0-4; moderate quality score = 5-8; high quality score = 9-11.

Quality Assessment Criteria:

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)?

Additional details on how we used AMSTAR criteria, based on Shea et al. 2007.

1. Was an *a priori* study design provided?
• *CA can't be used for this item.*
• Y = State their study objective/research question AND provide inclusion criteria.
• N = Information missing or incomplete. Didn't provide both research question and inclusion criteria.
2. Was there duplicate study selection and data extraction?
• Y = Stated that 2+ people did the screening and data extraction ("duplicate") and resolved disagreements.
• N = Stated that only 1 person did the screening.
• CA = Information about screening and resolution was unclear, incomplete, or missing.
3. Was a comprehensive literature search performed?
• *CA can't be used for this item.*
• Y = Must have searched at least 2 electronic sources (and stated what they are), o AND Provided the years searched, o AND Provided all key words, o AND a supplementary search strategy must have been done with at least 2 actions (i.e., consulting current contents, reviews, textbooks, specialized registers, experts in the field, websites, grey lit search, or reviewing references lists).
• N = Missing one (or more) of these four items.
4. Was the status of publication (e.g., grey literature) used as an inclusion criterion?
• *CA can't be used for this item.*
• Y = Stated that they searched materials regardless of the publication type, that publication status/type was part of inclusion criteria, OR that grey literature was included, o <u>AND</u> Stated whether any articles were excluded or included based on language.
• N = Missing one (or both) of these two items: o They restricted their search eligibility to only peer reviewed materials or did not have any mechanism for accessing grey literature, o AND/OR Did not say whether or not they excluded articles based on language.
5. Was a list of studies (included and excluded) provided?
• *CA can't be used for this item.*
• Y = Provided a list of all studies (supplemental online material is acceptable), or stated available upon request.
• N = Did not provide a list of all studies.
6. Were the characteristics of the included studies provided?
• *CA can't be used for this item.*
• Y: Provided for all studies reviewed: o 1) Sample size (*N*), o AND 2) Type of sample (school, clinic, population-based, etc.), o AND 3) Study site (state/region, country), o AND 4) At least one piece of other demographic info (age, gender, ethnicity, *or* marital status, etc.), o AND 5) Exposure information related to their research questions, o AND 6) Outcome information related to their research questions.
• N = Characteristics not provided for *all* studies analyzed.
o It is OK if the level of detail was not consistent across the studies reviewed. o If there was missing information in cells of the table that is OK (it would indicate oversight at the study-level, not by the reviewer). o Ideally, these characteristics are in aggregate form (e.g., in one or more tables) and the *ranges* for study characteristics were included.
7. Was the scientific quality of included studies assessed and documented?
• Y = Quality ratings must have been established *a priori,* o AND Ratings must be documented for each included study.
• N = No quality assessment done or documented.
• CA = Stated they included an assessment, but didn't thoroughly document the quality rating for every study.

8. Was the scientific quality of the included studies used appropriately in formulating conclusions?
• *CA can't be used for this item.*
• Y = Clearly stated how the "methodological rigor and scientific quality" were considered in the analysis, conclusions, and in formulating any recommendations.   o They talk about the difference between high and low quality when discussing results/conclusions (i.e., they refer to quality ratings in some way).
• N = No information was given about how quality assessments were actually used in analysis, conclusions, or recommendations.
9. Were the methods used to combine the findings of included studies appropriate?
• NA = Not applicable, not a meta-analysis.
• Y = For pooled results, tests were done to ensure the results were combinable and/or to assess homogeneity (i.e., chi-squared test for homogeneity).   o If heterogeneity existed, a random effects model was used and/or the clinical appropriateness of combining was taken into consideration (i.e., was it appropriate to combine).
• N = Did not do anything to ensure that it was appropriate to combine the studies quantitatively.
• CA = Can't tell because information missing/incomplete.
10. Was the likelihood of publication bias assessed?
• NA = Not applicable, not a meta-analysis.
• Y = Stated that they assessed publication bias,   o AND included graphs (e.g., funnel plot, other tests) and/or statistics (e.g., Egger regression test) to document the process.
• N = Did not include any information about publication bias.
• CA = Alluded to publication bias, but not clear if they actually assessed it or how.
11. Was the conflict of interest stated (for all included studies and the review itself)?
• *CA can't be used for this item.*
• Y = Potential sources of support were acknowledged for ALL studies within the review <u>AND</u> the review itself.
• N = Only included conflict of interest/support for the review itself, not the studies within (or vice versa).

Online Supplement 4

[Author names and affiliations masked]

Mental Health, Empowerment, and Violence Against Young Women in Lower-Income Countries: A Review of Reviews. *Aggression and Violent Behavior.*

Characteristics of the 25 Original Studies Included in Data Extraction

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Ayub 2009 (*Trevillion 2012)*	Pakistan *Lahore* -urban	Cross-sectional, stratified random. Primary private/non-profit health care facilities. Married.	N_{TOTAL} = 650 N_{GW} = 650 R_{AGE} =17-65 M_{AGE} = 34	*Phy IPV*: timeframe unclear, "physical violence" sum (CTS). *Psy IPV*: timeframe unclear, "verbal aggression" sum (CTS).	*Composite:* Y/N any ICD-10 Dx of depressive episode, dysthymia, GAD, panic disorder, agoraphobia, social phobia, PTSD, or OCD (MINI).	
Baker 2005 (*Trevillion 2012)*	Mexico *Guadalajara, Hermosillo, Merida, & Oaxaca* -urban	Cross-sectional, multistage probability. Analyzed only women who experienced violence. Marital status N/A.	N_{TOTAL} = 2,509 N_{GW} = 357 R_{AGE} =18-92$_{TOTAL}$ M_{AGE} = 39$_{TOTAL}$	*SV:* LT, Y/N, sexual assault or molestation vs physical assault/ threatened w/ weapon. Domestic: intimate partner/family vs stranger/friends/acquaintances.	*PTSD*: Y/N, Y = rated event most stressful/worst + met all DSM-IV criteria (modified CIDI 2.1, Module K).	
Chen 2004 *(Fry 2012, UNICEF 2012)*	China *Hubei province, Henan province, Hebei province, & Beijing* -urban sites; participants 60% urban	Cross-sectional, convenience. General & technical school students (grades 11 & 12). Marital status N/A.	N_{TOTAL} = 2,300 N_{GW} = 1,155 R_{AGE} =16-24$_{TOTAL}$ M_{AGE} = 17$_{GW}$	*CSA-C*: <16 years, Y/N, 10 items, attempted or completed oral, anal, genital acts. *CSA-NC*: <16 years, Y/N, 2 items, any person exposed genitals, masturbated in front of.	*Dep*: PW, 20 items (CES-D). *Dep:* PY, Y/N sad/hopeless 2+ weeks, curbed activities (YRBS). *SI*: PY, Y/N serious SI (YRBS). *SB*: PY, Y/N made plan (YRBS). *ED*: PM, Y/N no food >24 hours to lose weight (YRBS). *ED*: PM, Y/N used diet pills, powders, or liquids w/o Dr. advice (YRBS). *ED*: PM, Y/N used laxatives/vomited (YRBS). *SU*: PM, Y/N used tobacco ≥1 day (YRBS). *SU*: PM, Y/N 1+ drink (YRBS). *SU*: LT, Y/N ever been drunk (YRBS).	X

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Chen 2006 *(Fry 2012, UNICEF 2012)*	China *Henan province* -urban site; participants 62% urban	Cross-sectional, convenience. Medical tech school students. Marital status N/A.	N_{TOTAL} = 351 N_{GW} = 351 R_{AGE} =16-23	*CSA-C*: <16 years, Y/N, 10 items, attempted or completed oral, anal, genital acts. *CSA-NC*: <16 years, Y/N, 2 items, any person exposed genitals, masturbated in front of.	*Dep*: PW, 20 items (CES-D). *Dep:* PY, Y/N sad/hopeless 2+ weeks, curbed activities (YRBS). *SI*: PY, Y/N serious SI (YRBS). *SB*: PY, Y/N made plan (YRBS). *SU*: PM, Y/N used tobacco ≥1 day (YRBS). *SU*: PM, Y/N 1+ drink (YRBS). *SU*: LT, Y/N ever been drunk (YRBS).	X
Chowdhary 2008 *(Chen 2010)*	India *Goa* -urban	Cross-sectional & longitudinal, multistage, probability. Married.	Cross-sectional: N_{TOTAL} = 1,750 N_{GW} = 1,750 M_{AGE} =35 Longitudinal: N_{TOTAL} = 1,563 N_{GW} = 1,563 R_{AGE} =18-50	*Phy IPV*: LT & P3M, Y/N ever hit. *Psy IPV*: LT & P3M, Y/N ever used threatening or abuse language. *Sex IPV*: LT & P3M, Y/N ever forced sex.	*Composite*: current ICD-10 Dx of depression/anxiety disorder (CIS-R). *SB*: LT at time 1, PY at time 2, attempt (CIS-R).	
Contreras-Pezzoti 2010 *(Trevillion 2012)*	Colombia *Bucaramanga* -urban	Cross-sectional, case-control, convenience. Referred for "medico-legal clinical assessment." ~50% PY partner.	N_{TOTAL} = 394 N_{GW} = 394 N_{CASE} = 132 $N_{CONTROL}$ = 262 R_{AGE} = 14+$_{TOTAL}$ M_{AGE} = 31$_{CASE}$ M_{AGE} = 30$_{CONTROL}$	*2+ IPV*: PY, Y/N, any type.	*PTSD:* Y/N, DSM-IV Dx (SCID).	
Deyessa 2009 *(Trevillion 2012)*	Ethiopia *Meskan & Mareko* -urban/rural; 13% urban	Cross-sectional, probability. Registered in existing surveillance database. Married.	N_{TOTAL} = 1,944 N_{GW} = 1,944 R_{AGE} = 15-49: 15-24 (19%) 25-34 (44%) 35-44 (33%) 45-49 (4%)	*CSA*: <15 years, Y/N, sexual violation (happy/sad face cards). *Phy IPV*: LT, Y/N, 6 items (WHO). *Psy IPV*: LT, Y/N, 3 items (WHO). *Sex IPV*: LT, Y/N, 3 items (WHO). *2+IPV:* LT, Y/N, any phy IPV, psy IPV, or sex IPV.	*Dep*: Y/N, ICD-10 Dx of dep episode (CIDI 2.1).	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Fahrudin 2009 *(UNICEF 2012)*	Malaysia *Sabah* -urban	Cross-sectional, convenience, clinical. Referred to hospital after sex abuse. Marital status N/A.	N_{TOTAL} = 80 N_{GW} = 76 R_{AGE} = 9-18 M_{AGE} = 15_{TOTAL}	*CSA-C*: LT, freq (ever, seldom, often), intercourse, molesting, oral, using objects.	*Composite:* 54 trauma Sx (depression, anxiety, PTSD, dissociation, anger, sexual concerns; modified TSCC). *Dep*: 9 Sx, (modified TSCC). *Anxiety:* 9 Sx (modified TSCC). *PTSD*: 10 stress Sx, not including dissociation (modified TSCC). *Dissociation:* 10 dissociative Sx (modified TSCC).	X
Fisher 2010 *(Trevillion 2012)*	Vietnam *Hanam province & Hanoi province* -urban/rural	Cross-sectional, random sampling. Pregnant or mothers of young children. Married.	N_{TOTAL} = 364 N_{GW} = 364 M_{AGE} = 27	*PA*: <16 years, beaten by parent or person in authority. *2+ IPV*: PY, Y/N, any phy IPV (hit, slapped, kicked, dragged, choked, or punched) &/or psy IPV (current fear of spouse).	*Composite:* current DSM IV Dx of major depression, dysthymia, GAD, or panic disorder (SCID).	
Gass 2011 *(Trevillion 2012)*	South Africa -urban/rural; 58% urban	Cross-sectional, stratified, clustered multistage probability, secondary analysis (SASH data). Married/cohabitating.	N_{TOTAL} = 1,715 N_{GW} = 1,074 R_{AGE} = $18+_{GW}$: 18-34 (34%) 35-49 (39%) 50-64 (22%) 65+ (5%)	*Phy IPV*[c]: Y/N, 6 items (modified CTS).	*Dep:* Y/N, major depression or dysthymia, onset <20years (CIDI 3.0). *Dep:* Y/N, major depression or dysthymia, DSM-IV Dx >20 years (CIDI 3.0). *Anxiety*: Y/N, panic disorder, social phobia, agoraphobia, GAD, or PTSD, onset <20 years (CIDI 3.0). *Anxiety*: Y/N, panic disorder, social phobia, agoraphobia, GAD, or PTSD, DSM-IV Dx >20 years (CIDI 3.0). *SU*: Y/N, alcohol abuse or dependence, onset <20 years (CIDI 3.0). *SU*: Y/N, alcohol abuse or dependence, DSM-IV Dx >20 years (CIDI 3.0).	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Hindin 2006 *(UNICEF 2012)*	Philippines *Cebu* -urban site; participants 74%$_{GW}$ urban	Cross-sectional, randomly selected communities, secondary analysis (CLHNS data). Children of all pregnant women in 1983 study. Unmarried (14% married/cohabitating).	N_{TOTAL} = 2,051 N_{GW} = 2,051 R_{AGE} = 17-19 M_{AGE} = 18	*WA:* Y/N, parent hit, slapped, kicked, pushing, shoving to try to physically hurt the other (coded as either parent hurt the other, mother hurt father, father hurt mother, both hurt each other), Y/N injury required medical attention.	*Dep*: PM, 12 item depression Sx sum score.	X
Jewkes 2015 *(Norman 2012)*	South Africa *Eastern Cape province (Mthatha)* -rural	Cross-sectional, stratified, clustered, 2-stage (baseline for 2-arm longitudinal control trial). Majority recruited from schools. Marital status N/A.	N_{TOTAL} = 2,782 N_{GW} = 1,415 R_{AGE} = 16-26: 16-17 (44%)$_{GW}$ 18-20 (47%)$_{GW}$ 21+ (10%)$_{GW}$	*CSA-C:* <18 years, 4-pt freq. (recoded as never, some (sometimes to 1), & often (sometimes to 1+, *or* often/very often to 1; modified CTQ). *EA:* same coding. *N:* emotional neglect, same coding. *N:* physical neglect/hardship, same coding. *PA:* same coding.	*Dep*: PW, Sx score 21+ (CES-D). *SI*: PM, Y/N, suicidal thoughts. *SU:* PY & current, 12 items, score 8+, problem drinking (AUDIT).	X
Jeyaseelan 2004 *(Trevillion 2012)*	Chile *Temuco* Egypt *Ismailia* India *Lucknow* *Trivandrum* *Vellore* Philippines *Manila* -urban, non-slum	Cross-sectional, convenience sample of sites w/ multistage random sampling. Caring for child <18 years. Majority ever-partnered.	N_{TOTAL}/N_{GW} = Chile: 422 Egypt: 631 India L: 506 T: 700 V: 716 Philippines: 1,000 R_{AGE} = 15-49 (all samples)	*Phy IPV* [c]: LT, Y/N, slapped, hit or punched, kicked, or beaten (coded as any, all).	*Composite:* LT, Y/N, 20 items (depression, anxiety, or somatization), "cut points were determined by previous validation studies within each site" (SRQ-20).	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Kaminer 2008 *(Trevillion 2012)*	South Africa -urban/rural; 62% urban	Cross-sectional, probability, multistage stratified, secondary analysis (SASH data). Married/cohabitating.	N_{TOTAL} = 4,351 N_{GW} = 1,732 R_{AGE} = 20+$_{TOTAL}$	*PA*: LT, Y/N, as child, badly beaten by parents/primary caregiver (CIDI, PTSD Module). *Phy IPV*: LT, Y/N beaten (CIDI, PTSD Module). *SV*: LT, Y/N, other assault/ molestation CIDI, PTSD Module). *SV*: LT, Y/N, rape (CIDI, PTSD Module).	*PTSD*: LT, Y/N, DSM-IV PTSD Sx for one event considered worst (CIDI, PTSD Module).	
Kyu 2004 *(UNICEF 2012)*	Myanmar *Mandalay* -urban	Cross-sectional, probability, 3-stage, stratified, cluster. Married.	N_{TOTAL} = 286 N_{GW} = 286 R_{AGE} = 18-59	*PA*: physically punished as child (freq, 5-pt scale). *WA*: witnessed conflict/violence between parents (freq, 5-pt scale). *Phy IPV*: PY, freq, 7-pt scale, 2 factors (minor/severe; CTS2). *Psy IPV*: PY, freq, 7-pt scale, 2 factors (minor/severe; CTS2).	*Composite*: 17 Sx (e.g., angry, bothered, sadness, fear, low self-esteem, nervousness & anxiety), 3-pt severity scale.	
Luo 2008 *(UNICEF 2012)*	China -urban	Cross-sectional, probability, stratified, nationally representative (registered households & migrants). Majority married/ partnered (~86% w/ stable partner).	N_{TOTAL} = 2,994 N_{W} = 1,519 R_{AGE} = 20-64$_{TOTAL}$ 20-29 (25%)$_{GW}$ 30-39 (29%) $_{GW}$ 40-49 (27%) $_{GW}$ 50-64 (19%) $_{GW}$	*CSA-C*: <14 years, Y/N (vaginal sex, anal sex, touch genitals/breasts (modified USNHSLS).	*Dep*: P3M, freq, 4 items, 3-pt scale, "psychological distress" = lowest 25% (SDS).	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Nguyen 2009 *(UNICEF 2012)*	Vietnam *Hanoi &* *Hai Duong province* -urban/rural; 52% urban	Cross-sectional, convenience sample of schools, random sampling of classes. Secondary school students. Marital status N/A (likely unmarried).	N_{TOTAL} = 2,591 N_{GW} = 1,350 R_{AGE} = 12-18$_{GW}$	*CSA*: LT, contact & non-contact, 8 items, freq, 3-pt scale, coded Y/N based on mean (modified CTS2, CTQ, & others). *EA*: LT, emotional maltreatment, 7 items, freq, 5-pt scale, coded Y/N based on mean (modified CTS2, CTQ, & others). *N*: LT, emotional & physical neglect, 7 items, freq, 5-pt scale, coded Y/N based on mean (modified CTS2, CTQ, & others). *PA*: LT physical maltreatment, 6 items, freq, 5-pt scale, coded Y/N based on mean (modified CTS2, CTQ, & others).	*Dep:* dep Sx, 20 items (CES-D) *Anxiety:* fear, tension, worry Sx, 13 items.	X
Niu 2010 *(UNICEF 2012)*	China *Shanghai* -urban	Cross-sectional, 2-stage random sampling. University students. Unmarried.	N_{TOTAL} = 1,099 N_{GW} = 669 M_{AGE} = 22$_{TOTAL}$	*CSA*: <14 years, Y/N, contact & non-contact, 12 items (e.g., exposing genitals, forced touching, oral, anal, vaginal sex).	*SU*: LT, Y/N, "smoking" (substance not specified). *SU*: LT, Y/N, "drinking."	X
Ramiro 2004 *(UNICEF 2012)*	Chile *Temuco* Egypt *Ismalia* India *Lucknow* *Trivandrum* *Vellore* Philippines *Manila* -urban, non-slum	Cross-sectional, random sampling. Caring for child <18 years. Ever-partnered.	N_{TOTAL}/N_{GW} = Chile: 422 Egypt: 631 India L: 506 T: 700 V: 716 Philippines: 1000 R_{AGE} = 15-49 (all samples)	*Psy IPV* [c]: LT, PY, 7 items, freq, 3-pt scale (verbal abuse, fear, separation), coded Y/N "severe" if 3+ times.	*Composite:* LT, Y/N 20 items (depression, anxiety, or somatization), cut-point unclear (SRQ-20).	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Sun 2008 *(UNICEF 2012)*	China *Shandong province* -urban site: participants from urban/rural areas before college	Cross-sectional, convenience. Vocational college students. Marital status N/A.	N_{TOTAL} = 1,307 N_{GW} = 701 R_{AGE} = 18-25$_{TOTAL}$ M_{AGE} = 20$_{TOTAL}$	*CSA-C*: <18 years, 8 items (forced touching, inserting objects, attempted/completed genital/anal intercourse). *CSA-NC:* <18 years, 4 items (exposed genitals, played w/ genitals, peeped at breasts/genitals, exposed to pornographic book/images).	*Composite:* 90 items, severity, 5-pt scale (somatization, OCD, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism; SLC-90).	X
Vizcarra 2004 *(UNICEF 2012)*	Chile *Temuco* Egypt *Ismalia* India *Lucknow, Trivandrum, & Vellore* Philippines *Manila* -urban, non-slum	Cross-sectional, convenience sample of sites w/ multistage random sampling. Caring for child <18 years. Ever-partnered.	N_{TOTAL}/N_{GW} = Chile: 422 Egypt: 630 India: 1922 Philippines: 1000 R_{AGE} = 15-49 (all samples)	*Phy IPV:* PY, Y/N any abuse (slapped, hit, kicked, beaten, or threatened by partner). *Psy IPV*: PY, Y/N any abuse (insulted or belittled, threatened, or abandoned).	*Composite:* LT, 20 Y/N items (depression, anxiety, or somatization), "impairment" = 8+ score (SRQ-20). *SB:* suicide attempt (SRQ-20).	
Vung 2009 *(UNICEF 2012)*	Vietnam *Ha Tay province* -rural	Cross-sectional, probability, multistage stratified cluster sampling. Married/partnered (16% polygamous).	N_{TOTAL} = 883 N_{GW} = 883 R_{AGE} = 17-60$_{GW}$: 17-29 (22%) 30-60 (78%)	*2+ IPV:* PY, Y/N, phy IPV (6 items) and/or sex IPV (3 items; WHLEQ).	*Dep*: PY, Y/N, sadness or depression. *SI*: PY, Y/N, thoughts.	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
WHO 2005 *(UNICEF 2012)*	Bangladesh *Dhaka* *Matlab* Brazil *São Paulo* *Zona da Mata de Pernambuco* Ethiopia *Butajira* Namibia *Windhoek* Peru *Lima* *Cusco dept.* Samoa Serbia & Montenegro *Belgrade* Tanzania *Dar es Salaam* *Mbeya district* Thailand *Bangkok* *Nakhonsawan* -urban & rural sites in each country except ETH (rural), NAM (urban), SRB & MNE (urban)	Cross-sectional, population-based household survey. Ever-married.	N_{TOTAL}/N_{GW} = Bangladesh Urban: 1,372 Rural: 1,329 Brazil Urban: 940 Rural: 1,187 Ethiopia 2,261 Namibia 1,373 Peru Urban: 1,090 Rural: 1,536 Samoa 1,206 Serbia & Montenegro 1,194 Tanzania Urban: 1,450 Rural: 1,257 Thailand Urban: 1,051 Rural: 1,027 R_{AGE} = 15-49(all samples)	*2+ IPV:* LT, Y/N, any phy IPV &/or sex IPV (physical 6 items: slapped/thrown object, pushed/ shoved, hit w/ fist or something else, kicked/dragged/ beaten, choked/ burnt, threatened w/ or used gun, knife or weapon; sexual 3 items: forced sex, sex when fearful, degrading/ humiliating sexual act).	*Composite*: PM, Y/N 20 items (depression, anxiety, or somatization), mean scores (SRQ-20). *SI*: LT, Y/N, thoughts. *SB*: LT, Y/N, 1+ attempts.	

Study, Year (*Review*)[a]	**Location / Rural or Urban**	**Study Design**	**Sample**	**Exposures**[b]	**Outcomes**[b]	**~10-24 yrs**
Wong 2009 *(UNICEF 2012)*	China *Beijing,* *Hebei province,* *Henan province,* *Sichuan province,* *Hubei province, &* *Shandong province* -rural	Cross-sectional, convenience. Emergency department clinical sample. Suspected suicidal behavior. Ever-married.	N_{TOTAL} = 353 N_{GW} = 353 Median age = 32	*Phy IPV*: LT, beaten by spouse.	*Composite:* any DSM-IV Dx (affective, psychotic, substance, other; SCID). *Dep*: P2W, DSM-IV Sx, 8 items w/o suicidality (SCID). *SI*: 14 items (modified SIS). *SB:* history of *previous* attempt. *SU*: substance abuse Dx (SCID).	
Yasan 2009 *(Trevillion 2012)*	Turkey *Diyarbakir* -urban	Cross-sectional, probability stratified sampling. 76% housewives.	N_{TOTAL} = 708 N_{GW} = 398 $M_{AGE\ (TOTAL)}$ = 35	*2+ IPV*: LT, any phy IPV or sex IPV (CAPS).	*PTSD:* DSM-IV Dx if score 40+, 3+ avoidance Sx, 1 re-experiencing Sx, & 2 hyperarousal Sx (CAPS).	

[a] Studies and reviews are identified by first author and year of publication.

[b] Measures are author-created unless otherwise specified.

[c] Violence is the outcome variable in source study.

Note: Exposures/outcomes are those of interest for this review of reviews; several studies analyzed additional exposures/outcomes not tabled here. *2+ IPV* combination of two or more types of intimate partner violence, *AUDIT* Alcohol Use Disorders Identification Test (Saunders et al. 1993), *CAPS* Clinician Administered PTSD Scale (Blake et al. 1995), *CES-D* Center for Epidemiological Studies Depression Scale (Radloff 1977), *CIDI* World Mental Health Composite International Diagnostic Interview (Kessler and Ustun 2004), *CIS-R* Revised Clinical Interview Schedule (Lewis et al. 1992), *CLHNS* Cebu Longitudinal Health & Nutrition Survey, *CSA* childhood sexual abuse (both contact/non-contact), *CSA-C* contact childhood sexual abuse, *CSA-NC* non-contact childhood sexual abuse, *CTS* Conflict Tactics Scale (Straus 1979; Straus et al. 1996), *CTQ* Childhood Trauma Questionnaire (Bernstein and Fink 1998), *Dep* depression outcomes, *DSM-IV* Fourth Edition of the Diagnostic and Statistical Manual of Mental Disorders, *Dx* diagnosis, *freq* frequency, *GAD* generalized anxiety disorder, *ICD* International Classification of Diseases (National Center for Health Statistics 1980), *LT* lifetime, M_{AGE} Mean age, *MINI* The Mini-International Neuropsychiatric Interview (Sheehan et al. 1998), N_{GW} Number of girls and/or women in the study, *OCD* obsessive compulsive disorder, *P2W* past two weeks, *P3M* past 3 months, *Phy IPV* physical intimate partner violence, *PM* past month, *Psy IPV* = psychological intimate partner violence, *PTSD* post-traumatic stress disorder, *PW* past week, R_{AGE} age range, *SASH* South Africa Stress & Health Study, *SB* suicidal behavior outcomes, *SCID* Structured Clinical Interview for DSM Disorders (Spitzer et al. 1992), *SDS* Self-Rating Depression Scale (Zung 1965), *Sex IPV* sexual intimate partner violence, *SI* suicidal ideation outcomes, *SIS* Beck's Suicidal Intent Scale (Beck et al. 1974), *SLC-90*

Symptom Checklist (Derogatis, 1983), *SRQ-20* Self-Reporting Questionnaire (Beusenberg et al. 1994), *SU* substance use outcomes, *SV* sexual violence, *Sx* symptom(s), *TSCC* Trauma Sx Checklist for Children (Briere 1996), *US-NHSLS* US National Health and Social Life Survey (Laumann et al. 1995), *WHLEQ* WHO Women's Health & Life Experiences Questionnaire (WHO 2005), *YRBS* Youth Risk Behavior Survey (Brener et al. 1995).

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*Denotes a systematic review included in this study.

+Denotes an original study included in the data extraction.

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Online Supplement 5

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Mental Health, Empowerment, and Violence Against Young Women in Lower-Income Countries: A Review of Reviews. *Aggression and Violent Behavior.*

Extracted Results from 52 Unique Analyses Published in 25 Empirical Studies (negative [-], no [0], or positive [+] association reported).

Outcomes[a]	**Exposures**[a]											
	Child Maltreatment							IPV				SV
	CSA	CSA-C	CSA-NC	EA	N	PA	WA	Phy	Psy	Sexual	2+	
Composite Measures												
Ayub 2009								0	+			
Chowdhary 2008-C[b]								+	+	+		
Chowdhary 2008-L								0	0	0		
Fahrudin 2009[c]		+										
Fisher 2010						0					+	
Jeyaseelan 2004[d] CHL								0				
Jeyaseelan 2004 EGY								+				
Jeyaseelan 2004 IND-L								+				
Jeyaseelan 2004 IND-T								+				
Jeyaseelan 2004 IND-V								+				
Jeyaseelan 2004 PHL								+				
Kyu 2005						0	0	+	+			
Ramiro 2004[d] CHL									+			
Ramiro 2004 EGY									+			
Ramiro 2004 IND-L									+			
Ramiro 2004 IND-T									+			
Ramiro 2004 IND-V									+			
Ramiro 2004 PHL									+			
Sun 2008		+	0									
Vizcarra 2004 CHL								0				
Vizcarra 2004 EGY								+	0			
Vizcarra 2004 IND								+	+			
Vizcarra 2004 PHL								+				
Wong 2009								0				
Depressive Symptoms												
Chen 2004		++	++									
Chen 2006		++	0									
Deyessa 2009	+							+	+	0	+	
Fahrudin 2009		+										
Gass 2011[d]								0				
Hindin 2006[e]							0++					

Outcomes[a]	**Exposures**[a]											
	Child Maltreatment							IPV				SV
	CSA	CSA-C	CSA-NC	EA	N	PA	WA	Phy	Psy	Sexual	2+	
							++					
Jewkes 2010[f]		+		0	0+	+						
Luo 2008		+										
Nguyen 2009[g]	0			+	+	0						
Vung 2009											+	
WHO 2005 BGD $_{Rural}$											+	
WHO 2005 BGD $_{Urban}$											+	
WHO 2005 BRA $_{Rural}$											+	
WHO 2005 BRA $_{Urban}$											+	
WHO 2005 ETH											+	
WHO 2005 NAM											+	
WHO 2005 PER $_{Rural}$											+	
WHO 2005 PER $_{Urban}$											+	
WHO 2005 SRB, ME											+	
WHO 2005 THA $_{Rural}$											+	
WHO 2005 THA $_{Urban}$											+	
WHO 2005 TZA $_{Rural}$											+	
WHO 2005 TZA $_{Urban}$											+	
WHO 2005 WSM											+	
Wong 2009								+				
Anxiety Symptoms												
Fahrudin 2009		0										
Gass 2011[h]								++				
Nguyen 2009	0			+	0	+						
Suicide – Ideation												
Chen 2004		+	+									
Chen 2006		+	0									
Jewkes 2010[f]		0		0	0+	0						
Vung 2009											+	
WHO 2005 BGD $_{Rural}$											+	
WHO 2005 BGD $_{Urban}$											+	
WHO 2005 BRA $_{Rural}$											+	
WHO 2005 BRA $_{Urban}$											0	
WHO 2005 ETH											0	
WHO 2005 NAM											+	
WHO 2005 PER $_{Rural}$											+	
WHO 2005 PER $_{Urban}$											+	
WHO 2005 SRB, ME											+	
WHO 2005 THA $_{Rural}$											+	
WHO 2005 THA $_{Urban}$											+	
WHO 2005 TZA $_{Rural}$											+	

Outcomes[a]	**Exposures**[a]											
	Child Maltreatment							IPV				SV
	CSA	CSA-C	CSA-NC	EA	N	PA	WA	Phy	Psy	Sexual	2+	
WHO 2005 TZA $_{Urban}$											+	
WHO 2005 WSM											+	
Wong 2009								0				
Suicide - Behavior												
Chen 2004		+	0									
Chen 2006		+	+									
Chowdhary 2008-C								+	+	+		
Chowdhary 2008-L								+	0	+		
Vizcarra 2004 CHL								0				
Vizcarra 2004 EGY								+	0			
Vizcarra 2004 IND								+	+			
Vizcarra 2004 PHL								+				
WHO 2005 BGD $_{Rural}$											+	
WHO 2005 BRA $_{Rural}$											+	
WHO 2005 BRA $_{Urban}$											0	
WHO 2005 ETH											0	
WHO 2005 NAM											+	
WHO 2005 PER $_{Rural}$											+	
WHO 2005 PER $_{Urban}$											+	
WHO 2005 SRB, ME											+	
WHO 2005 THA $_{Rural}$											+	
WHO 2005 THA $_{Urban}$											+	
WHO 2005 TZA $_{Rural}$											+	
WHO 2005 TZA $_{Urban}$											0	
WHO 2005 WSM											+	
Wong 2009								0				
PTSD Symptoms												
Baker 2005[i]											+	+
Contreras-Pezzoti 2010											+	
Fahrudin 2009[j]		0+										
Kaminer 2008[k]						0		+				0+
Yasan 2009											+	
Eating Disorder Symptoms												
Chen 2004[l]		0++	00+									
Substance Use												
Chen 2004 [m]		0++	0++									
Chen 2006		+++	00									
Gass 2011[n]								0+				
Jewkes 2010[f]		+		0	0+	0						
Niu 2010 [o]	0+											

Outcomes[a]	**Exposures**[a]											
	Child Maltreatment							IPV				SV
	CSA	CSA-C	CSA-NC	EA	N	PA	WA	Phy	Psy	Sexual	2+	
Wong 2009								0				

a. Measures are author-created unless otherwise specified. Studies were inconsistent in the scales and cutoffs used to assess mental health conditions, so we interpret the findings with respect to symptoms rather than diagnoses.

b. Chowdhary et al. (2008) conducted cross-sectional (C) and longitudinal (L) results using the same sample from Goa, India.

c. Exposure was a comparison between CSA frequency groups (ever, seldom, often). Difference was between "ever" and "seldom."

d. Violence was the outcome variable in the source study.

e. Results for five WA measures: 0 = both hurt each other, + = either parent hurt the other, + = mother hurt father, + = father hurt mother, + = injury required medical attention.

f. Results for two neglect measures: 0 = physical neglect/hardship, + = emotional neglect.

g. Neglect measure is a combination of phy and emotional neglect.

h. Anxiety measure included PTSD among a set of several anxiety disorders.

i. *2+IPV* = Analysis was a comparison between any kind of domestic violence (partner, family) versus any kind of violence from someone else (stranger, friends, acquaintances); *SV* = Analysis was a comparison between sexual violence and physical violence, sexual more PTSD.

j. Results for two PTSD measures: 0 = PTSD, + = dissociation.

k. Results for two SV measures: 0 = other molestation, + = rape.

l. Results for three eating disorder measures in this order: 0 = used diet pills, powders, or liquids w/o doctor advice, + = no food >24 hours to lose weight, + = used laxatives/vomited.

m. Results for three substance use measures: 0 = tobacco use, + = 1+ drink and ever been drunk.

n. Results for two substance use measures: 0 = onset before age 20, + = diagnosis after age 20.

o. Results for two substance use measures: 0 = drinking, + = smoking.

Note. 2+ IPV combination of two or more types of IPV (see study entry in Table 2 for specific combination of abuse), *BGD* Bangladesh, *BRA* Brazil, *CHL* Chile, *CSA* childhood sexual abuse (both contact/non-contact), *CSA-C* contact childhood sexual abuse, *CSA-NC* non-contact childhood sexual abuse, *EA* emotional abuse, *EGY* Egypt, *ETH* Ethiopia, *IND* India, *IND-L* Lucknow, India *IND-T* Trivandrum, India, *IND-V* Vellore, India, *N* neglect, *NAM* Namibia, *PA* physical abuse, *PER* Peru, *PHL* Philippines, *Phy* physical, *Psy* psychological, *PTSD* Posttraumatic Stress Disorder, *SRB,ME* Serbia & Montenegro, *SV* sexual violence, *THA* Thailand, *TZA* Tanzania, *WA* witnessing parental abuse, *WSM* Samoa.