Interventions to reduce gender-based violence among young people living with or affected by HIV/AIDS in low- and middle-income countries

Accepted for publication in AIDS on 10th June 2019

TITLE PAGE

Full Title (119/120 characters): Interventions to reduce gender-based violence among young people living with or affected by HIV/AIDS in low- and middle- income countries.

Running Head (40/40 characters): Preventing GBV in young people affected by HIV.

Authors: Franziska MEINCK, DPhil[a,b,c], Marija PANTELIC, DPhil[a,d], Thees F. SPRECKELSEN, DPhil[a], Luisa ORZA, MA[d], Madison T. LITTLE, MSc[a], Vasileios NITTAS, MSc[e], Vanessa PICKER, MSc[a], Amy A. BUSTAMAM, MSc[f], Rocio HERRERO ROMERO, DPhil[a], Eric P DIAZ MELLA, MSc[g], and Heidi STÖCKL, DPhil[h]

[a] Department of Social Policy & Intervention, University of Oxford, United Kingdom

[b] Optentia, Faculty of Health Sciences, North-West University, South Africa

[c] School of Social and Political Sciences, University of Edinburgh, United Kingdom

[d] Frontline AIDS, Brighton, United Kingdom

[e] Epidemiology, Biostatistics and Prevention Institute, University of Zurich, Switzerland

[f] Department of Health Research Methods, Evidence and Impact, McMaster University, Canada

[g] Escuela de Psicología, Universidad Santo Tomas, Chile

[h] Department of Global Health and Development, London School of Hygiene and Tropical Medicine, United Kingdom

Corresponding author (and requests for reprints):

Dr Franziska Meinck

Department of Social Policy and Intervention

Oxford University

Oxford, OX1 2ER

Email: Franziska.Meinck@spi.ox.ac.uk

Word Count: 3947

Conflicts of Interest and Sources of Funding: The study was supported by Frontline AIDS with funding from the Embassy of the Netherlands in Maputo. FM was additionally funded by the Economic and Social Research Council under a Future Research Leader Award [ES/N017447/1]. HS time was funded by the Economic and Social Research Council/Global Challenges Research Fund [ES/P003176/1-GCRF: Economic empowerment and intimate partner violence in sub-Saharan Africa].

For the remaining authors, no conflicts were declared. The funders of the study were not involved in any part of the research.

ABSTRACT (250/250 words)

Objective(s): This study explored the effectiveness of gender-based violence (GBV) interventions on young people living with or affected by HIV in low- and middle-income countries (LMICs).

Design: Systematic review and meta-analysis.

Methods: We pre-registered a protocol, then searched thirteen databases and grey literature. We screened randomised and quasi-experimental studies (n=2199) of young people (aged 10–24) living with or affected by HIV in LMICs. Outcomes were GBV and/or GBV-related attitudes. We appraised the data for risk of bias and quality of evidence. Narrative syntheses and multi-level random effects meta-analyses were conducted.

Results: We included 18 studies evaluating 21 interventions. Intervention arms were categorised as: a) sexual health and social empowerment (SHSE) (n=7); b) SHSE plus economic strengthening (n=4); c) self-defence (n=3); d) safer schools (n=2); e) economic strengthening only (n=2); f) GBV sensitisation (n=2) and g) safer schools plus parenting (n=1). Risk of bias was moderate/high and quality of evidence low. Narrative syntheses indicated promising effects on GBV exposure, but no or mixed effects on GBV perpetration and attitudes for self-defence and GBV sensitisation interventions. Safer schools interventions showed no effects. For SHSE interventions and SHSE plus

economic strengthening, meta-analysis showed a small reduction in GBV exposure but not perpetration. Economic-only interventions had no overall effect.

Conclusions: SHSE, SHSE plus and self-defence and gender sensitisation interventions may be effective for GBV exposure and GBV-related attitudes but not for GBV perpetration. However, the quality of evidence is poor. Future intervention research must include both boys and girls, adolescents living with HIV and key populations.

Keywords: gender-based violence, HIV/AIDS, adolescents and young people, prevention, intimate partner violence, low- and middle-income countries

TEXT (3498/3500)

Introduction

Gender-based violence (GBV) is a global public health concern. GBV is defined as the exposure or perpetration of physical, emotional or sexual intimate partner violence (IPV) or sexual violence by a non-intimate partner. One in three women experience GBV in their lifetime [1]. Adolescents and youth are disproportionately affected by GBV [2]. A recent meta-analysis estimates that 28% of female adolescents and youth (aged 10–24) have experienced GBV with highest prevalence rates in Eastern and Southern Africa [3]. HIV-positive women report up to ten times higher odds of GBV compared to HIV-negative women [4], even after discounting other forms of abuse they experience, e.g., forced or coerced sterilisation. Recent studies have also highlighted the elevated risk of GBV for key populations affected by HIV including transgender people, men who have sex with men (MSM), sex workers, people in prison, and intravenous drug-users, particularly in low- and middle-income countries (LMICs) [5–10]. These groups are vulnerable due to punitive legal policies, criminalisation, and societal attitudes and therefore at higher risk of victimisation.

GBV is associated with higher HIV incidence in the general population [11]. Among youth populations, data are scarce but there is longitudinal evidence linking GBV to heightened risk for HIV acquisition among young women and girls [12]. These links have also been found for MSM, transgender people, those affected by HIV and other key populations [13,14]. It is thought that multiple complex pathways connect HIV with GBV including, but not limited to, fear of IPV when requesting protection during intercourse, when disclosing one's HIV status [15,16], or when accessing testing and

treatment, and multiple concurrent partnerships [17]. GBV can also disrupt HIV treatment and prevention services, resulting in reduced retention in care and poorer health outcomes [18,19]. Interventions are therefore urgently needed among adolescent and youth populations (ages 10–24) living with HIV, and those vulnerable to or affected by HIV, to interrupt synergies between HIV and GBV and reduce the burden of violence.

We aimed to 1.) investigate what GBV interventions have been developed and evaluated, 2.) examine the components and theory of change of GBV interventions, and 3.) evaluate their effect on exposure to and perpetration of GBV and GBV-related attitudes among adolescents and youth living with or affected by HIV in LMICs.

Methods

Search strategy and selection criteria

A systematic review following a pre-registered protocol [20] and the PRISMA guidelines was conducted. A comprehensive search strategy (Appendix 1) was developed for electronic databases and grey literature. Thirteen databases including PsychInfo and Embase; websites of relevant organisations; conference abstracts; trial registries; and reference lists of retrieved articles were searched between 2005 and 17th September 2018 with no language restrictions (Appendix 2). Relevant experts in the field were also contacted.

Studies were included if they evaluated an intervention reporting GBV or GBV-related attitudes as an outcome. Studies had to be randomised or quasi-randomised trials or pre-post-tests with a control group. Primary outcomes were physical, emotional, or sexual

IPV or non-partner sexual violence. Secondary outcomes were GBV-related attitudes (e.g., men have the right to have sex with their partners without their consent). Studies needed to include populations of adolescents or youth aged 10–24 living with or vulnerable to HIV (key populations or members of communities with generalised HIV epidemics) and living in a LMIC as defined by the World Bank [21].

Data extraction

Each study title and abstract were independently screened by two reviewers. Where there was uncertainty, full texts were screened, and discrepancies were resolved through discussion. Data were extracted, and risk of bias was assessed using a pre-tested data extraction sheet based on Cochrane and EPPI Centre guidance (Appendix 3) [22,23]. Study authors were contacted for additional information. Bias was examined using the Cochrane Risk of Bias Tool for randomised [24] and the ROBINS-I for non-randomised studies [25].

Data synthesis

A narrative review of intervention characteristics, components and findings was conducted, followed by a meta-analysis (Appendix 4). GRADE criteria were used to assess the overall quality of the body of evidence for GBV exposure and perpetration and GBV-related attitudes (Appendix 5) [26]. Disagreements were resolved by discussion.

Statistical analysis

For the meta-analysis, studies were grouped by intervention type based on the components they comprised. Significance tests for all statistical analyses were

evaluated at a 95% confidence level. Using the Practical Meta-Analysis Effect Size Calculator [27] and R, outcome effects were recalculated as odds ratios for all binary outcomes. Where reported, odds ratios for cluster-randomisation or adjusted analyses were used. For each meta-analysis and multilevel random-effects meta-analysis, odds ratios were log-transformed. Data from the first follow-up of each study after the intervention, which varied between 0 and 12 months post intervention, were included in the meta-analysis. Funnel plots were created to assess publication bias. Analyses were conducted in RStudio (v3.4.3), using the package metafor (v2.0.0) [28]**,** and assessed for heterogeneity for each comparison using visual inspection and statistical methods (X^2 *and* I^2). Extracted data and R-scripts are available at https://osf.io/dgjea/.

.

Results

Description of studies

The search retrieved 2199 unique articles, of which 18 met the inclusion criteria (Figure 1). This review included eight cluster randomised trials, two randomised trials and eight controlled before-after studies, which included 39,746 young people in 21 intervention arms (Table 1, included studies: Appendix 6&7). Three studies were unpublished conference abstracts or presentations [29–32], of which one was published during data extraction [33]. All studies were published between 2005 and 2018. Youth were aged 10–24; a mean age could not be calculated as not all studies provided this information. Eleven studies were carried out in schools and seven in community settings. Of the school-based studies, three took place in primary and eight in secondary schools.

All included studies focused on adolescents and youth vulnerable to HIV, based on their location in a country or area with an HIV epidemic. Studies from rural and urban areas in South Africa, Uganda, Kenya, Zimbabwe, Ethiopia and urban areas affected by high deprivation in Rio de Janeiro were included. None specifically recruited young people living with HIV/AIDS or key populations. Nine studies included only girls, six had boys and girls in equal measures, one had boys and girls but reported only female outcomes, and two included boys only. All of the mixed-sex studies except two used the same exposure and perpetration measures for boys and girls. Those two measured self-reported exposure for girls and perpetration for boys [30,34].

Insert Table 1 here

Insert Figure 1 here

Baseline prevalence of GBV

Study prevalence of GBV, where reported, can be found in Appendix 6.

Description of interventions

All interventions were multi-component, except for two focusing on cash transfers and savings accounts [33,35]. Interventions, or intervention arms in cases of multiple armed studies, were categorised based on the intervention's predominant components (see Table 2 for components and categories): a) sexual health and social empowerment (SHSE) (n=7) [32,34,36–40]; b) SHSE and economic strengthening (n=4) [35,41–43]; c) self-defence for girls (n=2) [44,45] combined which with gender sensitisation for boys (n=1) [46]; d) safer schools (n=2) [30,47]; e) economic strengthening only (n=2, one

three-armed intervention: other arms were SHSE and economic strengthening) [33,35]; f) GBV sensitisation and intervention training for boys (n=2, one describes the results for only girls who received a self-defence intervention in the same school as these boys) [46,48]; and g) safer schools plus parenting (n=1) [30].

SHSE interventions included components on HIV prevention and sexual and reproductive health (SRHR), including contraception, gender-equitable norms and conflict resolution skills. SHSE and economic strengthening interventions combined SHSE with vocational skills, savings accounts or financial skills training. Self-defence interventions comprised of skills to defend against assault, de-escalation techniques, empowerment, and safer spaces training. One study also had a GBV sensitisation component for boys. Safer school interventions focused on educating schools and teachers about alternative, positive discipline techniques and teacher-child power dynamics. Economic interventions provided cash transfers or savings accounts but no skills or SHSE training. GBV sensitisation training was aimed at boys only and focused on gender norms, GBV, consent and de-escalation techniques (Table 2 for components). The most common components were information on SRHR [29,34–37,39,41–43], GBV and gender norms [29,30,34–38,40,46,48], relationships [29,34,40,42,47] and communication [34,35,37,40,41]. Less frequent were empowerment and self-efficacy [39,44,45], de-escalation [41,44,46,48], self-defence [44–46], safe spaces [30,35,36,42], financial education [35,42,43] vocational skills [41–43], networking/social support/mentoring [35,42,43], safer schools [30,37,47], human rights [29,30,41], community involvement [34,38,40], savings accounts [35,43], social environment/peer pressure [29,39], health checks/access to health services [37,42], assessment of risky

situations [36,42,45,48], self-blame reduction for victims [45], consent [48] and cash transfers [33].

Insert Table 2 here

Intervention format

All interventions except for cash transfers and savings accounts were group-based and involved meetings and interactive discussions. Half of the interventions were school-based and half were community-based. Two interventions focused on community engagement [34,38,40]. Information on theory of change, duration and delivery of interventions is provided in Table 2.

Delivery methods

Multi-component interventions used group-based participatory approaches for most of their components. Only cash transfers and savings accounts used a dyadic approach. Group-based participatory approaches included role-playing, youth groups, mentoring, workshops and facilitated discussions.

Participant involvement

Ten studies involved youth in their design by piloting questionnaires or interventions [36,39,47,48], consulting them prior to intervention design [36,37,42,43,46,48] and development [29,37,48], or having them co-write the intervention content [40].

Control conditions

Most school-based studies used treatment as usual including the standard life-skills curriculum. Community-based interventions either offered no control intervention or treatment as usual. One study provided SHSE to the control [42].

Intervention outcomes

Most studies either measured solely IPV or non-partner sexual violence (primary outcome) or GBV-related attitudes (secondary outcome). Only three studies measured both primary and secondary outcomes [30,38,43]. Primary outcome measures included unwanted sexual touching [35], forced sex [30,32,33,36,37,41,44–46] and rape perpetration [30,34,36], sexual assault (forced sex and/or touching) [47], any physical or sexual IPV exposure [30,34,37,42] and perpetration [30,32,34,37,38], physical IPV exposure [32,33] and perpetration [32], and emotional IPV exposure and perpetration [32]. Secondary outcome measures included gender-equitable attitudes [30,38,40,43,48], attitudes towards coerced sex [39] and acceptance of IPV [40].

Overall, 10 of 21 interventions (n=18 studies) showed a reduction in GBV or in GBV-related attitudes compared to the control group. SHSE interventions showed reductions in GBV exposure (3/5 studies), perpetration (1/6) and GBV-related attitudes (1/3). SHSE plus economic strengthening interventions showed reductions in GBV exposure (2/4) and GBV-related attitudes (1/1) but did not measure perpetration. Self-defence interventions showed reductions in GBV exposure (3/3) but did not measure GBV perpetration or attitudes. Safer school interventions showed reductions in GBV exposure (1/2; one showed an increase in peer sexual violence for girls [47]), perpetration (0/1) and GBV-related attitudes (1/1). Of the economic interventions, cash transfers showed

reductions in GBV exposure [33] and savings accounts showed an increase [35], but they did not measure GBV perpetration or attitudes. GBV sensitisation interventions showed reductions in GBV (1/1) and GBV-related attitudes (1/1) but did not measure perpetration. Safer schools plus parenting showed no reductions in GBV exposure or perpetration (1/1) but reductions in GBV-related attitudes (1/1).

Risk of Bias in included studies

Risk of bias was a concern with high or unclear risk of bias across most assessment categories for most randomised studies (Figure 2) and moderate or high risk of bias in non-randomised studies (Figure 3).

Insert Figures 2 & 3 here

Meta-analyses are presented below for the intervention types: SHSE on GBV exposure and perpetration, and SHSE plus economic strengthening and economic strengthening only interventions on GBV exposure. These use nine of 18 studies with the outcome measured at first follow-up after the intervention. For all other intervention types, meta-analyses could not be conducted. This was due to too few studies in the intervention category (safer-schools plus parenting) or insufficient information to calculate effect sizes for synthesis (safer schools and self-defence), thereby reducing the number of analysable studies to less than two. Likewise, too few studies in each intervention category reported GBV-related attitudes to conduct analyses.

Effect of the interventions

Based on our analyses, an overall reduction could be observed for SHSE interventions on GBV exposure OR 0.85 (95% CI: 0.74-.0.98) with low levels of heterogeneity. An overall reduction of GBV exposure could also be observed for SHSE plus economic strengthening interventions OR 0.83 (0.73-0.94) with low levels of heterogeneity. No effect could be observed on GBV perpetration for SHSE interventions OR 0.84 (0.54-1.32) or exposure for solely economic interventions OR 1.35 (0.34-5.45) with high levels of heterogeneity. Publication bias is very likely for these studies considering asymmetries in the funnel plots (see Appendix 6 for Forrest and Funnel Plots) [22].

Quality of evidence

Using the GRADE criteria for randomised [26], non-randomised [49] and non-meta-analysed studies [50], the overall quality of the evidence was assessed as very low for GBV exposure, low for GBV perpetration and low for GBV-related attitudes (see Appendix 4).

Discussion

GBV is a global public health concern disproportionally affecting adolescents and youth and those living with or at of risk of HIV. Urgent intervention is required to reduce the burden of GBV, particularly in the context of HIV epidemics. This review found 21 heterogeneous interventions ranging from cash transfers to complex multi-component interventions. Multi-component SHSE and SHSE plus interventions showed small reductions in GBV exposure in the meta-analyses. This is an important finding as single-component interventions such as economic strengthening showed no effect on GBV exposure. In fact, the meta-analysis suggests a possible increase in risk in exposure driven

by an intervention providing savings accounts. The other intervention, a cash transfer, resulted in a large reduction in GBV exposure. The meta-analyses showed no effect for SHSE interventions on GBV perpetration.

For self-defence for girls, safer schools, GBV sensitisation training for boys and safer schools plus parenting programmes, insufficient data were provided to conduct meta-analyses. In the narrative analysis, self-defence interventions, GBV sensitisation and the combination of both showed promising effects on GBV-related attitudes and rape. Safer schools interventions showed no effects on GBV (except for an increase in sexual violence among girls in one study, possibly related to increased reporting).

None of the included interventions focused explicitly on adolescents and youth living with HIV or from key populations. While some of these were potentially included in the studies, no information was provided on whether interventions are suitable or would require adaptation for these groups or contexts outside of sub-Saharan Africa. Furthermore, most interventions focused on IPV prevention in heterosexual relationships as a primary outcome and only three interventions focused specifically on non-partner sexual violence.

It is noteworthy that all multi-component interventions used some form of group-based participatory delivery method. Involving adolescents through role-play, discussions and workshops appears critical for successful interventions, supporting skill building over knowledge acquisition while potentially increasing acceptability of topics covered and engagement with the material.

Most interventions focused on girls and young women and provided skills for avoiding risky situations where they might encounter violence. This is also demonstrated in the findings that show reductions in exposure but no effects on perpetration. These complex multi-component group-based participatory interventions are excellent for expanding girls' agency and empowerment as well as critical thinking about gender norms. However, it is concerning that we have limited knowledge about what works to change boys' behaviour and attitudes. Interventions should make room to include boys in ways that still protect safe spaces for girls. Harmful gender norms that drive GBV are difficult to change without involving all people who adhere to and act according to these norms. In fact, interventions involving the whole community either through engagement or mass media have been shown to be critical in shifting harmful gender norms [51,52], yet only three of the interventions included components targeting the wider community. Many interventions that successfully used community engagement to prevent and reduce GBV were excluded from the review because the impact of the intervention on adolescents and youth could not be discerned (Appendix 8: excluded studies). SHSE plus interventions for girls attempted to address this by providing participants with economic and vocational skills to improve economic standing in society in addition to SHSE knowledge. Other interventions focused on self-defence for girls, sometimes combined with gender sensitisation for boys, while safer schools and parenting was on offer for both boys and girls. Boys often received different programmes from girls, with components focused on consent, GBV and intervening to protect girls from harm.

None of the interventions acknowledged that boys and gender non-conforming youth may also be exposed to GBV themselves. Research shows more severe exposure and

harmful outcomes for girls in terms of IPV, but in a recent national study in South Africa, 9.9% of boys reported non-consensual sexual acts [53]. Interventions in this review often combined outcome data for both genders or only described GBV experience for girls and perpetration by boys. Overall, interventions to reduce GBV appeared more effective for exposure among girls than exposure among or perpetration by boys.

Measurement of GBV was heterogeneous across studies measuring sexual violence by any or specific perpetrators; combinations of multiple types of IPV (physical, sexual and emotional); individual types of IPV; and GBV-related attitudes using a variety of measures. This highlights the need for evaluations that include standardised measures reporting on individual IPV and sexual violence outcomes for both boys and girls.

Included non-randomised studies were of poor quality with regards to the construction of the control group. Studies did not use advanced matching techniques, regression discontinuity designs or interrupted time-series to establish causality. Thus, conclusions on effectiveness of these interventions are limited. Furthermore, some studies did not include the same participants at follow-up as at baseline. None of the non-randomised studies were pre-registered, leading to a high risk of selective outcome reporting.

Only one study in this review invited young people to co-create intervention content [40], only half involved young people in intervention planning. This is problematic as participatory research has been shown to make interventions more acceptable for the target audience [54] as well as being beneficial for participant-focused interpretation of data and implementation of study results [55].

Limitations of the review

This review is subject to a number of limitations that affected the analysis. First, this review focused only on studies reporting intervention effects for adolescents and youth. Multiple rigorous GBV prevention intervention evaluations had to be excluded as they only reported outcomes for adults or did not report results for <25 year olds. In light of emerging evidence suggesting incongruence between outcome reporting of older men in community-based studies (reporting reductions in perpetration) and women (reporting no change in violence exposure)[56], extrapolation of results from adult populations to adolescent populations would have been misleading. Second, included studies reported a variety of effect sizes (OR, RR, χ^2 and β- coefficients) which were transformed into odds ratios where sufficient information was provided, and not all cluster randomised studies adjusted for clustering. Third, while multi-level meta-analyses account for correlations between effect sizes within studies, they only partly account for individual-level effect correlations. Fourth, meta-analyses used data from the first point of follow-up as comparability of follow-up points varying from 0–36 months post intervention was not given. Thus, overall effects in the meta-analyses may be over estimations as effects can trail off over time. Finally, few of the randomised studies included in this review had low risk of bias. Many studies were not pre-registered, or did not provide sufficient information to assess risk of bias and the overall quality of the body of evidence presented in this review was rated as low.

Implications for research and practice

The results of this review have significant implications for research and practice. First, more research using rigorous experimental or quasi-experimental designs is needed to establish the effectiveness of interventions to reduce GBV among young people in LMICs living with or vulnerable to HIV. The promising effects shown by SHSE, SHSE plus economic strengthening, self-defence, gender sensitisation and cash transfers highlighted in this review need further testing. Second, to increase effectiveness of interventions, it is essential that young people are meaningfully involved in the research and intervention design. Third, future interventions should be evaluated with young people living with HIV and key populations of both genders to allow generalisability of the results to these groups. Fourth, organisations funding and implementing GBV interventions should include a budget sufficient for rigorous evaluations of these interventions with comparison groups to inform further investments in programming. Fifth, practitioners should focus on the best available evidence when selecting interventions for implementation and conduct rigorous evaluations where the implemented interventions are not evidence-based. Finally, for both research and practice, targeting community- and society-level factors rather than individual-level factors, and ensuring implementation and knowledge of laws to protect vulnerable populations from GBV may help shift gender norms to prevent and reduce GBV [57].

Conclusions

SHSE and SHSE plus economic strengthening interventions may reduce GBV exposure among adolescents and youth. More research is needed on the prevention of GBV exposure and perpetration, and on key populations and young people living with HIV. Finally, youth must be included in intervention design and evaluation.

ACKNOWLEDGEMENTS

Acknowledgements

We are grateful to all the young people who took part in the primary studies on gender-based violence that were included in this review. The study was supported by Frontline AIDS with funding from the Embassy of the Netherlands in Maputo. FM received additional funding from the Economic and Social Research Council under a Future Research Leader Award [ES/N017447/1].

Special thanks to all the authors of original papers who responded to queries and to Jennifer Rabedeau for editing and proof-reading.

Author contributions

FM and MP designed the overall study, and MTL, VN, HS and LO contributed to the protocol. FM, MTL, VN, VP and AAB conducted the abstract screening. FM and VP assessed full text eligibility. MTL designed the data extraction form with contributions from FM and MP. FM, VN, VP, RHR, EDM and AAB extracted the data and assessed risk of bias. FM wrote the paper and conducted the narrative analysis. MP and LO contributed to the narrative analysis. TFS calculated effect sizes and conducted the meta-analysis. FM and RHR GRADED the evidence. All authors contributed to the interpretation of the findings and the structure of the paper. All authors reviewed and approved the final version.

REFERENCES

1 WHO. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. Geneva: WHO; 2013.

2 Stöckl H, March L, Pallitto C, Garcia-Moreno C, Stöckl H, Devries K, *et al.* Intimate partner violence among adolescents and young women: prevalence and associated factors in nine countries: a cross-sectional study. *BMC Public Health* 2014; **14**:751.

3 Decker MR, Latimore AD, Yasutake S, Haviland M, Ahmed S, Blum RW, *et al.* Gender-Based Violence Against Adolescent and Young Adult Women in Low- and Middle-Income Countries. *J Adolesc Heal* 2015; **56**:188–196.

4 Maman S, Mbwambo JK, Hogan NM, Kilonzo GP, Campbell JC, Weiss E, *et al.* HIV-positive women report more lifetime partner violence: findings from a voluntary counseling and testing clinic in Dar es Salaam, Tanzania. *Am J Public Health* 2002; **92**:1331–7.

5 Decker MR, Lyons C, Billong SC, Njindam IM, Grosso A, Nunez GT, *et al.* Gender-based violence against female sex workers in Cameroon: prevalence and associations with sexual HIV risk and access to health services and justice. *Sex Transm Infect* 2016; **92**:599–604.

6 Kaplan RL, McGowan J, Wagner GJ. HIV prevalence and demographic determinants of condomless receptive anal intercourse among trans feminine individuals in Beirut, Lebanon. *J Int AIDS Soc* 2016; **19**:20787.

7 Stoicescu C, Cluver LD, Spreckelsen T, Casale M, Sudewo AG, Irwanto. Intimate Partner Violence and HIV Sexual Risk Behaviour Among Women Who Inject Drugs in Indonesia: A Respondent-Driven Sampling Study. *AIDS Behav* 2018; **22**:3307–3323.

8 Sabidó M, Kerr LRFS, Mota RS, Benzaken AS, de A. Pinho A, Guimaraes MDC, *et al.* Sexual Violence Against Men Who Have Sex with Men in Brazil: A Respondent-Driven Sampling Survey. *AIDS Behav* 2015; **19**:1630–1641.

9 Wolff N, Blitz CL, Shi J, Bachman R, Siegel JA. Sexual Violence Inside Prisons: Rates of Victimization. *J Urban Heal* 2006; **83**:835–848.

10 Blondeel K, de Vasconcelos S, García-Moreno C, Stephenson R, Temmerman M, Toskin I. Violence motivated by perception of sexual orientation and gender identity: a systematic review. *Bull World Health Organ* 2018; **96**:29-41L.

11 Kouyoumdjian FG, Calzavara LM, Bondy SJ, O'Campo P, Serwadda D, Nalugoda F, *et al.* Intimate partner violence is associated with incident HIV infection in women in Uganda. *AIDS* 2013; **27**:1331–1338.

12 Jewkes RKR, Dunkle KK, Nduna M, Shai N, Maman S, Campbell J, *et al.* Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study. *Lancet* 2010; **376**:41–48.

13 UNAIDS. Key population groups, including gay men and other men who have sex with men, sex workers, transgender people and people who inject drugs | UNAIDS. 2016.http://www.unaids.org/en/topic/key-populations (accessed 10 Sep2018).

14 Dunkle KL, Decker MR. Gender-Based Violence and HIV: Reviewing the Evidence for Links and Causal Pathways in the General Population and High-risk Groups. *Am J Reprod Immunol* 2013; **69**:20–26.

15 WHO and UNAIDS. 16 ides for addressing violence against women in the context of the HIV epidemic: a programming tool. Geneva: WHO & UNAIDS; 2013.

16 Colombini M, James C, Ndwiga C, Integra team I, Mayhew SH. The risks of partner violence following HIV status disclosure, and health service responses: narratives of women attending reproductive health services in Kenya. *J Int AIDS Soc* 2016; **19**:20766.

17 Rigby SW, Johnson LF. The relationship between intimate partner violence and HIV: A model-based evaluation. *Infect Dis Model* 2017; **2**:71–89.

18 Hatcher AM, Smout EM, Turan JM, Christofides N, Stöckl H. Intimate partner violence and engagement in HIV care and treatment among women. *AIDS* 2015; **29**:2183–2194.

19 Jewkes R, Dunkle K, Jama-Shai N, Gray G. Impact of Exposure to Intimate Partner Violence on CD4+ and CD8+ T Cell Decay in HIV Infected Women: Longitudinal Study. *PLoS One* 2015; **10**:e0122001.

20 Meinck F, Little M, Nittas V, Picker V, Bustamam A, Pantelic M, *et al.* Systematic review protocol: Interventions to prevent and reduce gender-based violence (GBV) among young people living with, or most affected by, HIV in low- and middle-income countries: a systematic review and narrative synthesis. York: PROSPERO; 2018.

21 World Bank. World Bank Country and Lending Groups.

2018.https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups%0A%0A (accessed 18 Apr2018).

22 The Cochrane Collaboration. *Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0*. Cochrane Collaboration; 2011.

23 EPPI-Centre. Review guidelines for extracting data and quality assessing primary studies in educational research Version 0.9.7. London: EPPI-Centre: Social Science Research Unit; 2003.

24 Higgins JPT, Altman DG, Gøtzsche PC, Jüni P, Moher D, Oxman AD, *et al.* The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *BMJ* 2011; **343**:d5928.

25 Sterne JA, Hernán MA, Reeves BC, Savović J, Berkman ND, Viswanathan M, *et al.* ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions. *BMJ* 2016; **355**:i4919.

26 Ryan R, Hill S. How to GRADE the quality of evidence. Cochrane Consumers and Communication Group; 2016.

27 Wilson D. Practical Meta-Analysis Effect Size Calculator - The Campbell Collaboration. Campbell Collab. https://campbellcollaboration.org/effect-size-calculato.html (accessed 11 Jul2018).

28 Viechtbauer W. Conducting Meta-Analyses in R with the metafor Package. *J Stat Softw* 2010; **36**:1–48.

29 Taylor M, Jinabhai C, Dlamini S, Sathiparsad R, Meyer-Weitz A, Eggers M, *et al.* P2-482 Evaluating a School Based RCT to Reduce Gender-Based Violence Among High School Students in Kwazulu-Natal, South Africa. In: *Journal of Epidemiology & Community Health.*; 2011. pp. A354–A354.

30 Jewkes R, Mahlangu P, Chirwa E, Gevers A, Shai N, Shamu S, *et al.* Skhokho Supporting Success: RCT evaluation of a multi-faceted school-based GBV prevention intervention. In: *Sexual Violence Research Initiative Forum*.Rio de Janeiro: ; 2017.

31 Kilburn K, Pettifor A, Edwards J, Selin A, Twine R, MacPhail C, *et al.* The effect of a conditional cash transfor for HIV prevention on the experiences of partner violence for young women: Evidence from a randomized experiment in South Africa HPTN068. In: *APPAM Proceedings 39th Annual Fall Conference*.Chicago, IL, US: APPAM; 2017.

32 Taylor M, Jinabhai C, Dlamini S, Sathiparsad R, Meyer-Weitz A, Eggers M. A school-based RCT to reduce gender violence among high-school students in KwaZulu-Natal, South Africa. In: *SVRI Forum*.Cape Town: ; 2011.

33 Kilburn KN, Pettifor A, Edwards JK, Selin A, Twine R, MacPhail C, *et al.* Conditional cash transfers and the reduction in partner violence for young women: an investigation of causal pathways using evidence from a randomized experiment in South Africa (HPTN 068). *J Int AIDS Soc* 2018; **21**:e25043.

34 Jewkes R, Nduna M, Levin J, Jama N, Dunkle KL, Puren A, *et al.* Impact of stepping stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial. *BMJ* 2008; **337**:a506.

35 Austrian K, Muthengi E. Can economic assets increase girls' risk of sexual harassment? Evaluation results from a social, health and economic asset-building intervention for vulnerable adolescent girls in Uganda. *Child Youth Serv Rev* 2014; **47**:168–175.

36 Jemmott JB, Jemmott LS, O'Leary A, Ngwane ZP, Teitelman AM, Makiwane MB, *et al.* Effect of a Behavioral Intervention on Perpetrating and Experiencing Forced Sex Among South African Adolescents. *JAMA Netw Open* 2018; **1**:e181213.

37 Mathews C, Eggers SM, Townsend L, Aarø LE, de Vries PJ, Mason-Jones AJ, *et al.* Effects of PREPARE, a Multi-component, School-Based HIV and Intimate Partner Violence (IPV) Prevention Programme on Adolescent Sexual Risk Behaviour and IPV: Cluster Randomised Controlled Trial. *AIDS Behav* 2016; **20**:1821–1840.

38 Pulerwitz J, Hughes L, Mehta M, Kidanu A, Verani F, Tewolde S. Changing gender norms and reducing intimate partner violence: Results from a quasi-experimental intervention study with young men in Ethiopia. *Am J Public Health* 2015; **105**:132–137.

39 Rijsdijk LE, Bos AE, Ruiter RA, Leerlooijer JN, De Haas B. The World Starts with Me: A multilevel evaluation of a comprehensive sex education programme targeting adolescents in Uganda. *BMC Public Health* 2011; **11**:334.

40 Rocha V. *An Evaluation of Program M in Rio De Janeiro, Brazil: An Analysis of Change in Self-Efficacy in Interpersonal Relationships, Gender Equity, and Self-Reported Risky Behaviors among Women in Two Low-Income Communities*. PhD Diss. 2013.

41 Bandiera O, Buehren N, Burgess R, Goldstein M, Gulesci S, Rasul I, *et al.* Women's Empowerment in Action : Evidence from a Randomized Control Trial in Africa. Washington D.C.: ; 2017.

42 Dunbar MS, Kang Dufour M-S, Lambdin B, Mudekunye-Mahaka I, Nhamo D, Padian NS. The SHAZ! Project: Results from a Pilot Randomized Trial of a Structural Intervention to Prevent HIV among Adolescent Women in Zimbabwe. *PLoS One* 2014; **9**:e113621.

43 Erulkar A, Chong E. Evaluation of a Savings & Micro -Credit Program for Vulnerable Young Women in Nairobi. Nairobi: Population Council; 2005.

44 Sarnquist C, Omondi B, Sinclair J, Gitau C, Paiva L, Mulinge M, *et al.* Rape Prevention Through Empowerment of Adolescent Girls. *Pediatrics* 2014; **133**:e1226–e1232.

45 Sinclair J, D M, Sinclair L, Otieno E, Mulinge M, Ph D, *et al.* Original article A Self-Defense Program Reduces the Incidence of Sexual Assault in Kenyan Adolescent Girls. *J Adolesc Heal* 2013; **53**:374–380.

46 Baiocchi M, Omondi B, Langat N, Boothroyd DB, Sinclair J, Pavia L, *et al.* A Behavior-Based Intervention That Prevents Sexual Assault: the Results of a Matched-Pairs, Cluster-Randomized Study in Nairobi, Kenya. *Prev Sci* 2017; **18**:818–827.

47 Devries KM, Knight L, Allen E, Parkes J, Kyegombe N, Naker D. Does the Good Schools Toolkit Reduce Physical, Sexual and Emotional Violence, and Injuries, in Girls and Boys equally? A Cluster-Randomised Controlled Trial. *Prev Sci* 2017; :1–15.

48 Keller J, Mboya B, Sinclair J, Githua O, Mulinge M, Bergholz B, *et al.* A 6-week school curriculum improves boys' attitudes and behaviors related to gender-based violence. *J Interpers Violence* 2015; :1–23.

49 Schünemann HJ, Cuello C, Akl EA, Mustafa RA, Meerpohl JJ, Thayer K, *et al.* GRADE guidelines: 18. How ROBINS-I and other tools to assess risk of bias in nonrandomized studies should be used to rate the certainty of a body of evidence. *J Clin Epidemiol* Published Online First: 2018. doi:10.1016/j.jclinepi.2018.01.012

50 Murad MH, Mustafa RA, Schünemann HJ, Sultan S, Santesso N. Rating the certainty in evidence in the absence of a single estimate of effect. *Evid Based Med* 2017; **22**:85–87.

51 Abramsky T, Devries K, Kiss L, Nakuti J, Kyegombe N, Starmann E, *et al.* Findings from the

SASA! Study: a cluster randomized controlled trial to assess the impact of a community mobilization intervention to prevent violence against women and reduce HIV risk in Kampala, Uganda. *BMC Med* 2014; **12**:122.

52 Green D, Wilke A, Cooper J. Countering violence against women at scale: a mass media experiment in rural Uganda. New York: ; 2019.

53 Ward C, Artz L, Leoschut L, Kassanjee R, Burton P. Sexual violence against children in South Africa: a nationally representative cross-sectional study of prevalence and correlates. *Lancet Glob Heal* 2018; **6**:e460–e468.

54 Nastasi B, Varjas K, Schensul S, Silva K, Shensul J, Ratnayake P. The Participatory Intervention Model: A framework for conceptualizing and promoting intervention acceptability. *Sch Psychol Q* 2000; **207**–**232**.

55 Brett J, Staniszewska S, Mockford C, Herron-Marx S, Hughes J, Tysall C, *et al.* Mapping the impact of patient and public involvement on health and social care research: a systematic review. *Heal Expect* 2014; **17**:637–650.

56 Gibbs A, Jewkes R, Sikweyiya Y, Jama-Shai N, Willan S, Chirwa E, *et al.* Stepping Stones and Creating Futures: An evidence-based intervention to prevent violence against women and improve livelihoods. ; 2019.

57 World Health Organziation. INSPIRE: seven strategies for ending violence against children. Geneva: WHO; 2016.

58 Moher D, Liberati A, Tetzlaff J, Altman D. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 2009; **6**:e1000097.

INDIVIDUAL TABLES AND FIGURES

Table 1: Characteristics of included studies and their outcome

First Author (year)	*Location*	*Design*	*Population*	*Intervention*	*Control*	*Outcome(s)*	*Effect Size[1] (OR unless otherwise specified)*
Austrian & Muthengi, 2014	Uganda, Kampala, informal settlements	Pre-post-test with accidental assignment to intervention A and B, control systematically different (intervention A n=451; intervention B n=300; control C=313)	Adolescent girls aged 10─19 in low-income areas	Community based interventions A: savings plus B: savings only	No intervention	Unwanted sexual touching past 6 months (A & B vs control) Unwanted sexual touching past 6 months (Int A) Unwanted sexual touching past 6 months (Int B)	2.47 (0.74-8.24) 1.80 (0.81-3.99) 3.15 (1.40-7.08)
Baiocchi et al., 2017	Kenya, Nairobi, informal settlements	Cluster RCT (intervention n=3529, cluster=16; control n=2827, cluster=16))	Primary school children aged 10─16	School-based sexual assault prevention intervention including self-defence, also included a gender sensitisation intervention for boys in the same schools	1.5-2hr life-skills class on hygiene, food safety and personal rights as part of usual curriculum	Rape since intervention (girls)	3.7% (0.4-8.0) % risk reduction
Bandiera et al 2017	Uganda, rural and urban communities	Cluster RCT (intervention n=3964, cluster=100; control n=2002, cluster=50)	Adolescent girls (aged 14─20, mean age 16)	Adolescent club intervention on empowerment and livelihood	No intervention	Forced sex past year	0.82 (0.72-0.93)[a]
Devries et al., 2017	Uganda, Luwero	Cluster RCT (intervention n= 2097 students, cluster= 21; control n=2041, cluster=21)	Primary school children aged 11─14 (mean age 13)	Good Schools Toolkit for reducing violence in schools	No intervention	Peer sexual violence past term Peer sexual violence past term (girls) Peer sexual violence past term (boys) Teacher sexual violence past term Teacher sexual violence past term (girls) Teacher sexual violence past term (boys)	2.01 (0.92-4.40) 3.39 (1.22-9.40) 0.64 (0.15-2.73) 1.04 (0.48-2.25) 1.20 (0.46-3.12) 0.85 (0.27-2.69)

[1] Calculated using Wilson [online] effect size calculator. Significance measured at a 95% confidence level.

First Author (year)	*Location*	*Design*	*Population*	*Intervention*	*Control*	*Outcome(s)*	*Effect Size[1] (OR unless otherwise specified)*
Dunbar et al., 2014	Zimbabwe, Chitungwiza (urban high density)	Individual RCT (intervention n=158; control n=157)	Out of school, female adolescent orphans aged 16─19 (mean age 18)	SHAZ! Multi-component interventions including life-skills, health, vocational training and micro grants	Life skills and health education same as intervention group but no additional components	Any physical or sexual violence since last study visit	0.68 (0.27-1.74)
Erulkar & Chong, 2005	Kenya, Nairobi, low-income informal settlements	Longitudinal study with matched control (intervention n=326; control n=326)	Out of school young women aged 16─22	TRY modified group-based finance intervention including savings, credit, business support and mentoring	No intervention	Gender attitudes	1.30 (1.24-1.37)
Jemmott et al., 2018	Eastern Cape Province, South Africa, a township and a semirural area	Cluster RCT: secondary analysis, planned after data was collected. (intervention n=306 female adolescents, n=255 male adolescents; control n=240 male adolescents, n=251 female adolescents)	Adolescent men and women aged 9─18	Let Us Protect Our Future intervention. Theory-based, culturally adapted, 6-session HIV/sexually transmitted disease risk-reduction intervention	Chronic disease prevention control intervention	Lifetime forced sex perpetration (boys) Lifetime forced sex exposure (boys) Lifetime forced sex exposure (girls and boys) Lifetime forced sex perpetration (girls and boys)	RR 0.95 (0.92-0.99) RR 0.96 (0.92-1.00) 0.53 (0.26 – 1.08)[a] 0.38 (017 – 0.85)[a]
Jewkes et al., 2008	South Africa, Eastern Cape, villages and townships in rural areas	Cluster RCT (intervention n=694 men, n=715 women, cluster=35; control n=666 men, n=701 women; clusters=35)	Adolescent men and women aged 16─23 (some lies about actual age so aged 15─25)	Stepping Stones participatory single sex group-based HIV prevention	3hr session on HIV, safer sex and condoms	Rape/attempted rape of non-intimate partner perpetration >1 physical or sexual IPV perpetration since last interview >1 physical or sexual IPV exposure since last interview	0.71 (0.47-1.07)[a] 0.73 (0.50-1.06) [a] 0.87 (0.64-1.18) [a]
Jewkes et al., 2017	South Africa, Gauteng	Cluster RCT (n=3756 intervention A clusters=8; intervention B clusters=8; control cluster=8)	School children in grade 8 aged 12─19	Skhokho Supporting Success multi-component intervention Intervention A: school strengthening Intervention B: School and family strengthening	Standard curriculum	Any physical or sexual IPV perpetration (boys, Int A) Any physical or sexual IPV perpetration (boys, Int B) Any physical or sexual IPV victimisation (girls Int A) Any physical or sexual IPV victimisation (girls Int B) Non-partner rape perpetration past year (boys Int A) Non-partner rape perpetration (boys Int B) Non-partner rape victimisation (girls Int A)	AIRR 0.94 (p=0.682) AIRR 0.93 (p=0.644) AIRR 0.94 (p=0.610) AIRR 0.93 (p=0.607) AIRR 1.02 (p=0.849) AIRR 1.00 (p=0.992) AIRR 0.98 (p=0.870)

First Author (year)	*Location*	*Design*	*Population*	*Intervention*	*Control*	*Outcome(s)*	*Effect Size[1] (OR unless otherwise specified)*
						Non-partner rape victimisation (girls Int B)	AIRR 0.86 (p=0.307)
						Gender attitudes (boys Int A)	0.57 (p=0.019) OLS coefficient
						Gender attitudes (boys Int B)	0.20 (p=0.41) OLS coefficient
Keller et al., 2015	Nairobi, Kenya, secondary schools located in or bordering the six largest slums	Quasi-experimental pre-post test (intervention n=1543; control=293)	Adolescent boys aged 15─22	"Your Moment of Truth" (YMOT). Gender-based violence educational curriculum intervention	2hr life skills class	Gender attitudes	Between effect: control group scored significantly higher than the control group at FU, t (1306) = 13.51, p < .0001
Kilburn et al., 2018	South Africa, Mpumalanga, rural	RCT (intervention n=1225; control n=1223)	Unmarried young women aged 13─20 (mean age 15) enrolled in high school and living with caregiver	Cash-transfer condition on school-attendance over period of 3 years	No cash transfer	Forced sex past year Any physical IPV past year	1.16 (0.94-1.42) [a] 0.48 (0.41-0.57) [a]
Mathews et al., 2016	South Africa, Western Cape	Cluster RCT (intervention n=1748, clusters=20; control n=1703, clusters =22)	Adolescents in Grade 8 in public high schools (mean age 13)	PREPARE after school, group-based HIV prevention intervention	School as usual	Any IPV experience past 6 months Any IPV perpetration past 6 months Unwilling first intercourse	0.77 (0.60-0.98) 1.57 (0.88-2.80) 0.91 (0.63-1.32)
Pullerwitz et al., 2015	Ethiopia, Addis-Ababa, low-income sub-cities	Pre-post-test with random assignment of sub-cities to intervention A (n=251), intervention B (n=235), and control (n=159).	Young men aged 15─24	Gender norm change and HIV prevention interventions Intervention A: community engagement and information Intervention B: Community engagement plus group education	Waitlist control	High gender equitable norms (A vs B vs Control) Moderate gender equitable norms (A vs B vs Control) Low gender equitable norms (A vs B vs Control) Any physical or sexual IPV perpetration (A vs B vs Control)	40% vs 34% vs 30% 29% vs 34% vs 37% 31% vs 32% vs 55% 18% vs 16% vs 14%
Risjdijk et al., 2011	Uganda	Quasi-experimental pre-post-test design in matched schools (intervention n=832; schools=24; control n=1011, schools=24)	Secondary school students aged 12─19	Worlds Starts with me low-tech computer-based, interactive sex education program	Waitlist control	Attitudes towards coerced sex	1.12 (0.95-1.32)
Rocha et al., 2013	Brazil, Rio de Janeiro, slum communities	Quasi-experimental pre-post-test in two matched geographic locations (intervention n=114; control n=159)	Young women in low-income communities aged 14─20	Program M, a multi-component group-based sexual and reproductive health intervention with social communication campaign to engage communities	Waitlist control	Acceptance of domestic violence Non-gender equitable attitudes	0.71 (0.11-4.44) 0.95 (0.61-1.47)

First Author (year)	*Location*	*Design*	*Population*	*Intervention*	*Control*	*Outcome(s)*	*Effect Size[1] (OR unless otherwise specified)*
Sarnquist et al. 2014	Kenya, Nairobi, informal settlements	Pre-post-test in 4 intervention and 1 control neighbourhoods using repeated cross-sections (intervention n=1978, neighbourhoods =4; control n=428, neighbourhoods=1)	Adolescent girls attending low performing secondary schools (aged 13─20)	No means No, empowerment, self-defence and life-skills group-based intervention	Life skills class	Forced sex past year (change within intervention group) Forced sex past year (change control group)	Rate Ratio 1.61 (1.26-1.86); 17.9% vs 11.1% Rate Ratio 1.02 (0.67-1.57); 14.3% vs 14.0%
Sinclair et al., 2013	Kenya, Nairobi, urban informal settlements	Longitudinal cohort study in 6 schools pre and post intervention (intervention n=402, schools=4; control n=120, schools=2)	Adolescent high-school girls aged 14─21 years (mean age 16.7)	No means No: empowerment, self-defence and de-escalation	Life skills class	Sexual assault victimization past year	0.34 (0.19-0.59)
Taylor et al., 2011/2014	South Africa, KwaZulu-Natal, urban and rural areas	Cluster RCT (intervention n=432, cluster=8; control n=386, cluster =8)	Adolescents in grade 8 of high school (mean age males 14.8; mean age females 13.9)	Classroom-based sexual health intervention	School life skills curriculum	Physical IPV exposure (boys and girls) Emotional IPV exposure (boys and girls) Sexual IPV exposure (boys and girls) Physical IPV perpetration (boys and girls) Emotional IPV perpetration (boys and girls)	0.78 (.56-1.04) 1.11 (0.83-1.50) 0.99 (0.35-2.83) 0.83 (0.62-1.12) 1.08 (0.80-1.44)

[a] Note that this OR was calculated for the purposes of the meta-analysis and does not account for the clustering in this study

Table 2: Interventions, their components and categorisations

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
Austrian & Muthengi, 2014	A: Savings plus	Safe spaces: short training sessions on a variety of topics to build social assets and a platform in which girls are organized	30─90 min. sessions weekly overall duration of intervention 1 year	Community groups of up to 25 girls. Facilitated by mentor: young women aged 20─35 in the same community as the girls. Intensive 5-day delivery training. Supervision 1/month	Adolescent girls need combination of health, social and economic assets in order to make a healthy transition into an adulthood. These assets will also reduce poverty. Only assets or vocational skills are not sufficient as it won't allow girls to use their networks and capitalize on economic opportunities. Only knowledge on health etc. is not sufficient as economic vulnerability trumps knowledge and leads to increased risky behaviour. Successful interventions address the underlying causes and linkages that put girls at risk.	Comprehensive SHSE plus economic strengthening	None reported
		Tuko Pamoja: Adolescent Reproductive Health and Life Skills Curriculum: information on puberty, reproduction, family planning, HIV/AIDS, STIs, drug abuse, communication, gender-based violence, peer pressure	30 sessions	No information provided			
		Young Women: Your future your money. Financial education on personal money management, exploring options for earning money in formal and informal economies	Sessions as part of safe spaces	Mentor			
		Savings accounts: savings group and individual savings account	Throughout	Local banks			
	B: Savings	Savings accounts: savings group and individual savings account	Throughout	Local banks	Girls were not informed that they could join the plus component and this was thus an accidental additional arm	Economic	
Baiocchi et al., 2017	IMPower	Girls: education to empower girls to avoid risky situations, advocate for themselves and defend themselves against an attack. Sessions: building rapport, personal awareness, boundaries, physical defence, verbal and physical skills, self-defence, de-escalation and negotiation, sharing of assault experiences and linking survivors to a support group	6 week, 2hr sessions classroom based with booster training session within 3 months	Group-based including role-plays, facilitated discussions and verbal and physical skill practice Delivered by instructors who were respected members of their communities and had a background in and passion for prevention of sexual violence. They received extensive training by experience facilitators. New trainers were supervised throughout the first year. All sessions had ratios of approximately 1 instructor to 15 students	Based on Social Learning Theory and the Health Belief Model aiming to increase self-efficacy as a key component of behaviour change.	Self-defence	Focus groups and classroom content piloting with target populations during intervention development
	50:50	Boys: developing awareness about gender interactions, negative gender roles, identifying emotions, skill building around courage, use of verbal interventions in harassment or assault situations	6 week, 2hr sessions classroom based with booster training session within 3 months			GBV sensitisation	

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
Bandiera et al 2017	Empowerment and Livelihood for Adolescents (ELA)	Adolescent community clubs which host popular activities such as reading, staging drama, dancing, singing, playing games.	5 afternoons per week for 4 years	Adolescent community clubs led by female mentors selected from the community trained for 1 week and with monthly refresher courses.	Vocational skills with financial literacy and life skills will aid the empowerment of girls through relaxation of human capital constraints that adolescent girls face and enhancing control over their body. Kick-starting human capital to break the vicious circle between low labour force participation and high fertility.	Comprehensive SHSE plus economic strengthening	None reported
		Vocational skills taught through adolescent community clubs: courses on income generating activities, supporting the establishment of small-scale enterprises such as hair-dressing, tailoring, computing, poultry rearing also including financial literacy	Sessions offered during the first two years of the intervention	Taught by entrepreneurs engaged in the respective activities or by hired professionals as well as BRAC's agriculture and livestock program staff			
		Life skills: SRH, menstruation, pregnancy, STIs and HIV, family planning, rap, management skills, conflict resolution, leadership, legal knowledge on women's issues such as bride price and VAC	Sessions offered during the first two years of the intervention	Life skills sessions led by mentors or by BRAC's professional staff			
Devries et al. 2017	Good School Toolkit	Complex, whole-school intervention. Six steps containing 60 different activities for staff, students and administration focused on improving the school environment, creating a better learning environment, fostering respect among stakeholders, understanding power relationships, improving teaching techniques, learning non-violent methods of discipline and creating accountability	Varies between schools receiving the intervention.	Delivered by two staff and two students per school in group-based format. Leaders receive ongoing support from Raising Voices, the NGO who developed the intervention. Schools must set goals, make action plans, think about rewards and reinforcements and creating social support for change. During the intervention Raising Voices staff provide one-on-one support through visits (2/term) and telephone calls.	Draws on the Trans-theoretical model of behaviour change and aims to improve children's experience of school by training teachers and school administration in understanding power relationships, accountability, transparency, working in collaboration with students, taking into account their community's and student's backgrounds and beliefs	Safer schools	children participate actively in the committees and groups set up to make their school safer- questionnaires were piloted with primary school children
Dunbar et al., 2014	A: Shaping the Health of Adolescents in Zimbabwe SHAZ!	Reproductive health services: health screening, treatment for STIs and minor ailments, free contraceptives, HIV+ participants referred to local clinics and aided with ART registration	Every study visit	Trained project staff	Naila Kabeer's Theory of Women's empowerment. Empowerment is a process by which one develops increased access to resources and greater agency ultimately improving capabilities or the capacity to effect outcomes in one's own life.	Comprehensive SHSE plus economic strengthening	young women gave input into the design of the intervention
		Life skills education and home-based care training: SRH, relationship negotiation, strategies to avoid	Life skills: 14 modules over 4─6 weeks	Life skills: delivered to groups of 25			

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
		violence, identification of safe and risky places in the community	Home-based care: Skills around safely caring for people living with HIV	Home-based care: conducted through Red Cross Zimbabwe	The program's components were thought to work together to increase knowledge, improve social and economic indicators and enable participants to reduce risky behaviours and optimize healthy ones. These improvements then reduce HIV acquisition and unintended pregnancy.		
		Livelihoods: financial literacy education and choice of vocational training, those who completed the training successfully developed a business plan and received support through a micro grant	6 months long	At local training institutes conducted in English with a practical and theoretical component			
		Integrated social support: guidance counselling to help participants navigate challenges	Underpinned the livelihoods component	By trained staff and self-selected mentors			
Erulkar & Chong, 2005	Tap and Reposition Youth (TRY) Savings and Micro-Credit	Multi-component intervention which combines savings, micro-credit, training in business and life skills, reproductive health and mentoring by adults from the community	Group meetings 1─2 hrs/week with KDA credit officer Group discussions, education sessions, recreation, excursions, sports and fitness organized by adult mentors following TRY group meetings.	Formation of KIWAs (groups of 15─25 young women) which elect their own representatives and are registered as a self-help group. Group opens savings account and receive 6─day training facilitated by KDA. After 8 weeks of saving, group decides which of its members receive first disbursement of loans, other members only receive disbursements when loans have been repaid in full. Part-time adult mentors from various professions receive 5─day training course.	Improving adolescent's livelihood options by reducing their vulnerabilities to adverse social and reproductive health outcomes.	SHSE plus economic strengthening	piloting with adolescent girls which led to changes to the program to better meet adolescent girl's needs
Jemmott et al., 2018	Let Us Protect Our Future	Interactive education to reduce sexual risk behaviours with particular focus on abstinence and condom use: self-efficacy on being aware of risky sexual situations, and how to plan to avoid them, reinforce pride in having a healthy relationship, know and express their limits to avoid risky behaviours and sex refusal. Sessions: "The Long Walk Home", the "What is a Relationship", the "Understanding Risky Situations", the "Knowing and Setting Sexual Limits"	12 1-hr modules, with 2 modules delivered during each of 6 sessions on consecutive school days	Games, brainstorming, role-playing, group discussions, and comic workbooks with a series of characters and story lines. Mixed-sex groups of 9─16 adolescents co-facilitated by a specially trained man and woman. These facilitator pairs modelled egalitarian gender roles in delivering the intervention.	Based on social cognitive theory and the theory of planned behaviour. The intervention was primarily designed to reduce sexual risk behaviours. It also included several features designed to address gender issues and rape myth beliefs relevant to perpetration and experience of forced sex.	SHSE	unclear in the paper if they followed protocol plans re the participation of adolescents in the development and piloting of the intervention—formative qualitative research with target group prior to intervention development
Jewkes et al., 2008	Stepping Stones	Multi-component HIV-prevention intervention which combines information on sexual and reproductive health, gender-based violence, motivation for sexual	13 3hr sessions plus 3 meetings and a community meeting. 50 hrs	Participatory single sex, group-based programme in schools complemented by 3 meetings of male and female peer group and final community meeting.	Building stronger, more gender equitable relationships to improve sexual health	SHSE	none reported

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
		behaviour, communication skills, dealing with grief and loss	delivered in 6─8 weeks	Participatory learning, approaches, including critical reflection, roleplay, and drama and draws the everyday reality of participants' lives into the sessions. Implemented by project staff who were employed by partner organization the Planned Parenthood Association of South Africa. 11 facilitators delivered the intervention after 3 weeks of training and two practice groups. Facilitators were slightly older than study participants, had post-school qualifications and were selected for their demonstration of open-mindedness and gender sensitivity			
Jewkes et al., 2017	Skhokho Supporting Success	A: School Strengthening: 1) Grade 8 Life Orientation Learner Workbook, Educator Guide, Life Orientation Educator Support workshop, 2) Educator training on values, positive discipline skills, adolescent development and stress and coping, 3) Learner club on safe and vibrant school communities, human rights, communication and conflict resolution	Unclear expect for learner club workshops which are 10 sessions x 30 mins.	School-based IPV prevention. Life Orientation delivered by teachers trained in the curriculum. No further information available	Prevention of IPV through addressing the underlying risk factors of IPV operating at different ecological levels. In order to prevent IPV the interventions aim to build gender equality, challenge normative use of violence in schools and homes, strengthens teen-adult relationships and communication and builds on negotiation, conflict resolution and coping skills.	Safer schools	none reported
		B: School and Family Strengthening: as above plus 1) workshop for caregivers and adolescents aiming to promote supportive, open relationships between caregivers and teens, communication, negotiation, conflict resolution, positive discipline, child abuse, stress and coping and challenging traditional gender roles	4-day workshops			Safer schools plus parenting	
Keller et al., 2015	No Means No Worldwide Your Moment Of Truth	Education: to address attitudes toward women, promote gender equality, development of positive masculinity, and teach boys how to safely and effectively intervene in GBV	Six 2-hr weekly sessions for 6 weeks immediately after school. 2-hr refresher courses were held at 4.5 and 9 months post-intervention.	After-school workshops. All instructors were males from the local region and ranged in age from 20─34 years. Average instructor to student ratio was 1:18.	Attitudes toward women can be an important barrier to intervening in situations involving GBV	GBV sensitisation	Approximately one dozen facilitated pilot classes with boys of the intended age participated in the curriculum development. Their opinions on relevant topics, such as gender, relationships, personal risks, violence, and so on, were obtained.

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
Kilburn et al., 2018	HPTN 068	Cash transfer conditional on young women's school attendance (80% month), ZAR 100 paid to young women, ZAR 200 paid to caregiver	3 years (while young woman is eligible for schooling)	Administered by study team, teachers had to take attendance	Cash transfers and education will empower young women and lead to improved sexual behaviour which will reduce young women's vulnerability to HIV and IPV	Economic	none reported
Mathews et al., 2016	PREPARE HIV prevention	Education: values and aspirations, assertive communication, gender power inequities, relationships, sexual decision making, IPV and sexual violence, support for victims of IPV	21 sessions, 1/week, 1.1-1.5hrs duration	25 participants, skill-based and interactive school-based workshops delivered by PREPARE staff who were screened for positive gender norms and comfort with sexuality education. Received 2-week training course and subsequent weekly training, supervision and session prep support.	Reasoned Action Framework with I-Change Theoretical model and Jewkes conceptual framework on IPV.	SHSE	pilot testing of educational component with Grade 8 students prior to RCt, formative qualitative research with adolescents to identify attitudes, bliefs and social norms re barriers and facilitators to safe sexual behaviour. Pilot testing including cognitive interveiws of questionnaires
		School health service: SRH education, SRH services and referral to services or commodities where needed.	1/ week after school	Individual intervention delivered by nurses from nearest public clinic.	Modelled on the new South African Integrated School Health Policy		
		School safety program: knowledge about laws regarding sexual violence, participatory safety audits plus photovoice activities	2-day training course	School teams comprise principals, teachers, school safety officers, parent representatives and local police officers received training at central venue delivered by PREPARE team with Centre for Justice and Crime Prevention.			
		Photovoice: risk mapping of unsafe situations and places in school	5 2-hr sessions	2-day training on photovoice for 20 students at each school. Facilitated by 2 PREPARE researchers			
Pulerwitz et al., 2015	Engaging Boys and Men in Gender Transformation	A: Community engagement: newsletters, leaflets, drama skits, workshop meetings and distribution of condoms focusing on gender norm changes and HIV prevention	6 months	Designed by research intervention and research team took place in entire communities. Activities engaged the wider community in supporting a shift in specific harmful norms. Engaging Boys and Men in Gender Transformation, a manual based on Engender Health and Promundo's	Promoting critical reflection regarding common gender norms to decrease the risk of gender-based violence, HIV and STIs. Informed by the theory of gender and power, a social structural theory that addresses environmental	SHSE	none reported

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
				gender-transformative programming.	and social issues relating to gender		
		B: Community engagement plus group education. Education: activities included role plays, group discussions, and personal reflection	8 sessions with 2-3 hrs duration over period of 4 months	Regularly scheduled youth groups in youth centres, usually on weekends using role plays, group discussion and personal reflection with approx. 20 participants. Sessions were facilitated by 2 or 3 peer educators with oversight from a master trainer.	dynamics, particularly sexual division of labour, sexual division of power, and the structure of cathexis. According to this theory, various negative health and other outcomes stem from the socialisation of women to be sexually passive, women's economic reliance on men, and abusive partnerships. The theory affirms— that addressing gender norms is a core factor in reducing both IPV and related health risks such as HIV and other STIs	SHSE	
Rijsjdijk et al., 2011	The World Starts With Me	Interactive sex education program: self-esteem, decision making, personal norms and values, gender equity and sexual and reproductive rights, SRH and goal setting	14 sessions delivered over 6 months	School-based, low-tech and computer-based delivered outside of the normal curriculum using virtual peer educators and making use of adolescent's creative skills to solve tasks. Activities: theme-based warming-up activities, games and interactive assignments (e.g. role-plays) Students are guided by teachers in their use of the program. Teachers receive 5─6 days of training.	Using the Theory of Planned Behaviour and the Health Belief Model as a conceptual framework: knowledge on rights, health, behaviour and adolescent development aims to empower and support adolescents to make informed decisions about sex.	SHSE	questionnaire was pre-tested among adolescents
Rocha et al., 2013	Program M	Education: knowledge and skills on gender identity, sexuality, SRH, HIV prevention and GBV	18 workshops over period of 4 months	Workshops with group activities and peer discussions conducted by facilitators held in community centres. Activities involve role-playing, discussions and a cartoon video. Facilitators are aged 30-45 with experience in conducting workshops on health for women in low-income communities and receive 40hr training on facilitation with subsequent weekly 3hr supervision meetings. All facilitators have a Bachelors degree in psychology or social work.	To change women and their communities gender norms and attitudes and in turn increase women's self-efficacy in interpersonal relationships	SHSE	young men and women helped co-create the community radio intervention content
		Social media communication campaign: Radio soap opera and strip	Several times a day over 4 months	Social communication campaign written by young people in slums			

Study ID	Intervention Name	Components	Duration	Delivery	Theory of change	Intervention categorisation	Youth Involvement
		booklets to engage within HIV prevention and strengthen gender equitable attitudes	Animated strip booklets distributed in communities over 4 months	and aired through the community radio station Distributed by young women who participate in the program			
Sarnquist et al. 2014	No Means No	Empowerment, de-escalation and self-defence skills and linkage of sexual assault survivors to self-help groups	6 sessions, 6 x 2hrs with 3x 2 hr refresher at 3, 6 and 10 months.	Role-play, discussion and extensive verbal and physical technique practice facilitated by local women instructors and their supervisors aged 20─34 years with at least 2 years of experience advocating to reduce GBV in their neighbourhoods. Trainers received 276 hours of training and hands-on practice monitored by supervisors.	The intervention was grounded in social learning theory and the health belief model and was adapted from existing empowerment and self-defence modules. Curriculum developed based on the special needs of women and children living in areas with high rape incidence. Based on women's empowerment and self-defence programs from high income countries.	Self-defence	piloting of questionnaires
Sinclair et al., 2013	No Means No	Empowerment, de-escalation and self-defence skills	6 sessions, 6 x 2hrs with 4x2 hr refresher at 3, 6, 9 and 10 months.	Role-play, discussion and extensive verbal and physical technique practice facilitated by local women instructors in groups of 15. Instructors were 20─32 years of age and selected from the same neighbourhoods as the participants and trained over a 3 months period.	Curriculum developed based on the special needs of women and children living in areas with high rape incidence. Based on women's empowerment and self-defence programs from high income countries.	Self-defence	none reported
Taylor et al., 2011/2014	Teenage pregnancy (TP) prevention program	Gender norms, self-knowledge, relationships, sexual consensus, SRH, parenthood, human rights plus standard school life skills curriculum	16 modules over 4 months.	Classroom-based interactive intervention program implemented by 2 trained facilitators. Variety of activities: role plays, small and large group discussions, debates, and viewing of videos made especially for the discussions with students	Based on the integrated model of behaviour change which assumes that predisposing factors such as knowledge influence motivating factors such as attitudes and these lead to behaviour change.	SHSE	none reported

Figure 1: Prisma Flow Chart [58]

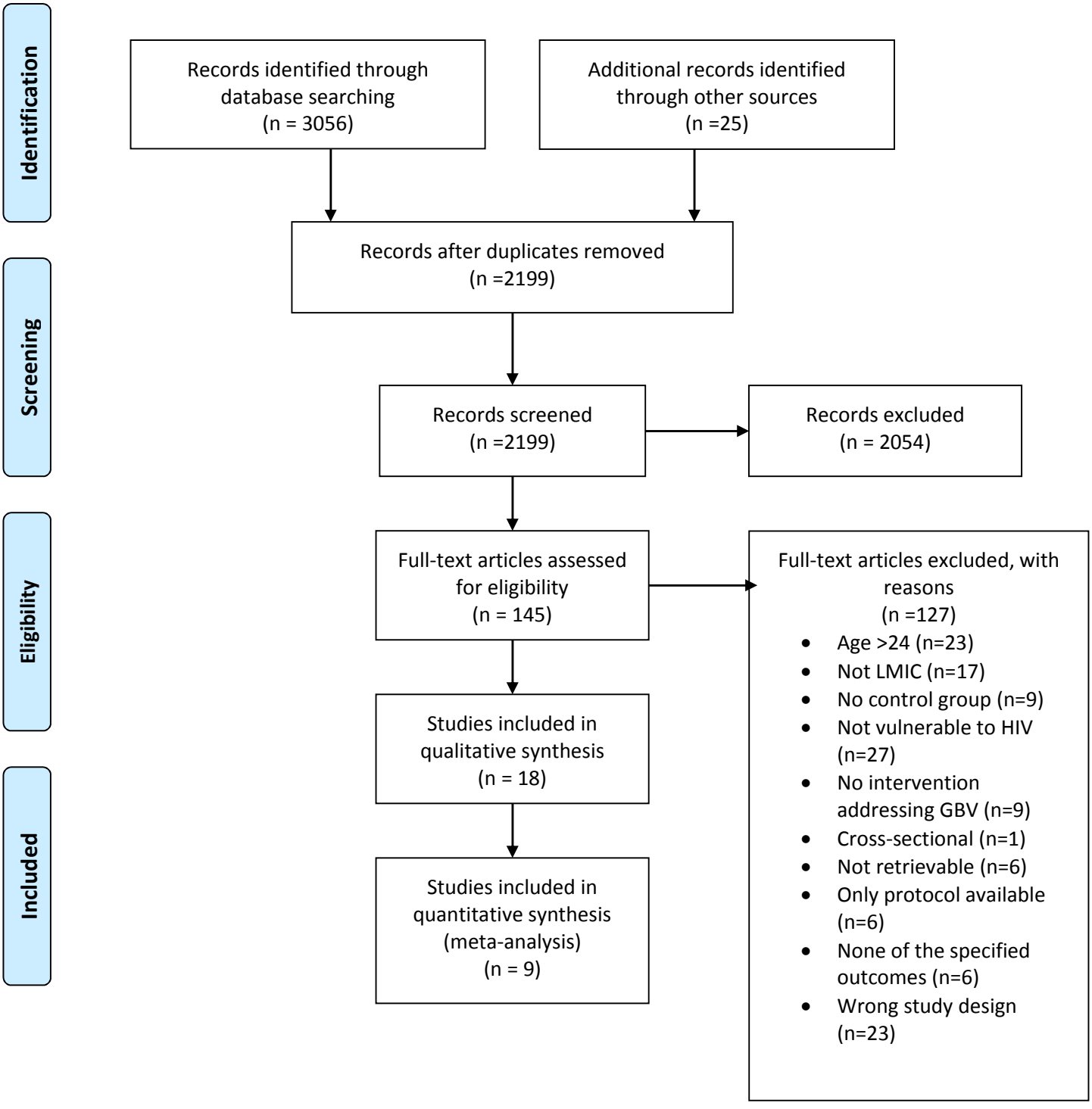


Figure 2: Risk of Bias in randomised studies

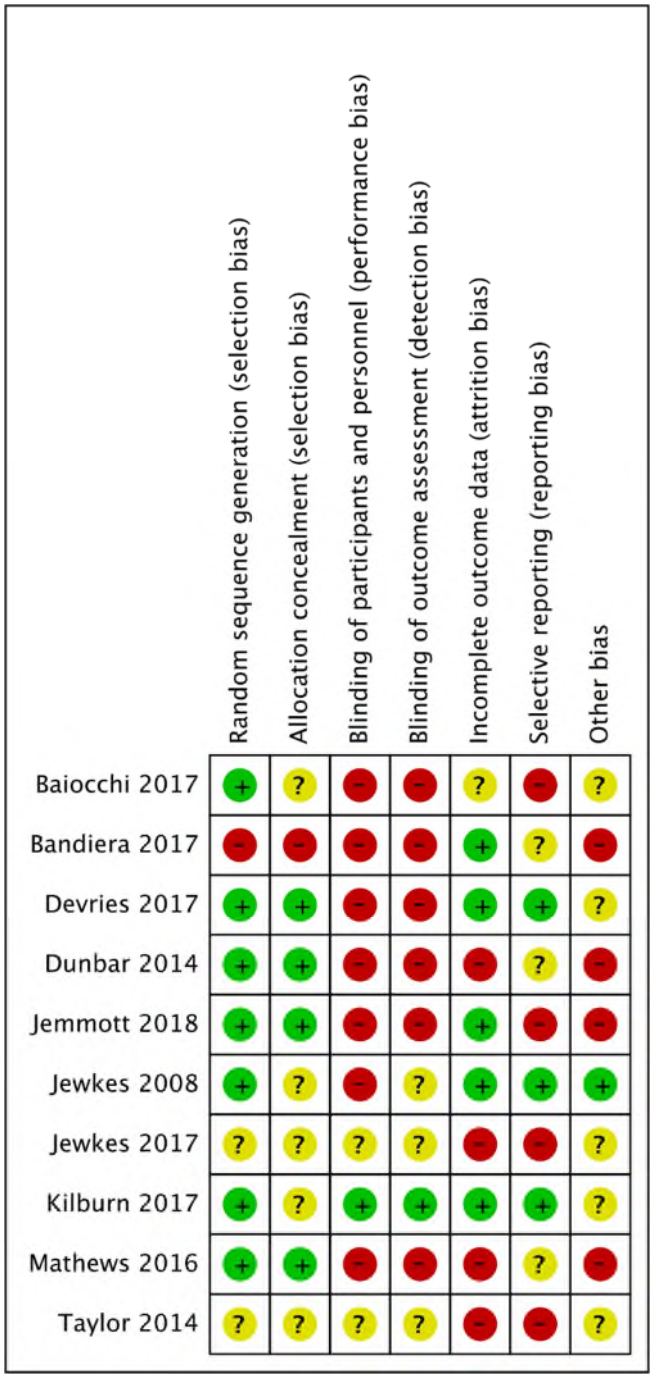
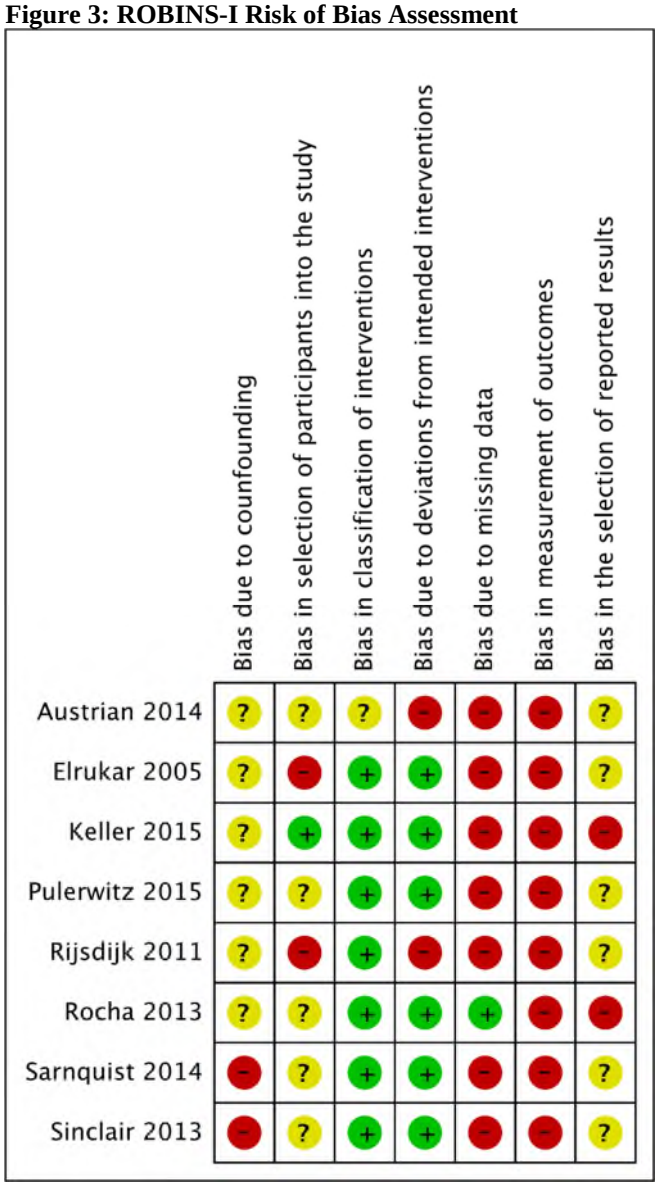


Figure 3: ROBINS-I Risk of Bias Assessment



Appendices

Appendix 1 Search Strategy Details

1. Final search strategy for OVID interface

#	
1	exp developing countries/
2	(Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America).hw,ti,ab,cp.
3	(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 Brasil 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 dIvoire 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 Isle of Man 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 or Sabah or 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 Ifni 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 or 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 South Africa 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).hw,ti,ab,cp.
4	(low adj3 middle adj1 countr*).ti,ab.
5	(lmic or lmics or third world or lami countr*).ti,ab.
6	(transitional countr* or emerging market* or emerging countr*).ti,ab.
7	1 or 2 or 3 or 4 or 5 or 6
8	(Intervention* or program* or prevention or policy or policies).ti,ab.
9	("gender-based" or "gender based" or "intimate-partner" or "intimate partner" or domestic or dating or sexual or physical or emotional or economic or psychological or spousal).ti,ab.
10	(violence or maltreat* or aggress* or assault or beat* or abuse* or batter*).ti,ab.
11	(GBV or IPV or "child marriage" or rape or "violence against women").ti,ab.
12	9 and 10
13	11 or 12
14	7 and 8 and 13
15	("sex work" or "sex workers" or prostitut* or brothel* or ((escort or sex) adj3 buy*) or (commercial adj3 sex*) or (sex adj3 industry) or (heteroflexible or homosexual* or homosexualit* or gay* or MSM or "men who have sex with men" or bisexual)).ab,ti.
16	(stimulant* or polydrug* or drug* or substance).ab,ti.
17	(prison* or jail* or penitentiar* or bastile* or offender* or reoffend* or convict or convicts or convicted or inmate* or detainee* or cellmate* or incarcarated or incarcaration or felon* or criminal* or men or women or male or female).ab,ti.
18	15 or 16 or 17
19	14 and 18
20	7 and 18
21	8 and 13 and 20

2. Final search strategy for PROQUEST

	((Developing countries) OR (Africa OR Central Africa OR Latin America OR Caribbean OR West Indies OR Eastern Europe OR Soviet OR South America OR Arab OR Middle East 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 Brasil 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 dIvoire 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 Isle of Man 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 OR Sabah OR 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 Ifni 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 OR 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 South Africa 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 (low adj3 middle adj1 countr*) OR (lmic OR lmics OR third world OR lami countr*) OR (transitional countr* OR emerging market* OR emerging countr*) OR (low adj3 middle adj1 countr*) OR (lmic OR lmics OR third world OR lami countr*) OR (transitional countr* OR emerging market* OR emerging countr*))
AND	((("gender-based" OR "gender based" OR "intimate-partner" OR "intimate partner" OR domestic OR dating OR sexual OR physical OR emotional OR economic OR psychological OR spousal) AND (violence OR maltreat* OR aggress* OR assault OR beat* OR abuse* OR batter*)) OR (GBV OR IPV OR "child marriage" OR rape OR "violence against women"))
AND	(("sex work" OR "sex workers" OR prostitut* OR brothel* OR ((escort OR sex) adj3 buy*) OR (commercial adj3 sex*) OR (sex adj3 industry) OR (heteroflexible OR homosexual* OR homosexualit* OR gay* OR MSM OR "men who have sex with men" OR bisexual)) OR (stimulant* OR polydrug* OR drug* OR substance) OR (prison* OR jail* OR penitentiar* OR bastile* OR offender* OR reoffend* OR convict OR convicts OR convicted OR inmate* OR detainee* OR cellmate* OR incarcarated OR incarcaration OR felon* OR criminal* OR men OR women OR male OR female))
AND	(teen* OR youth OR adolescent* OR "young people" OR "young adult*")
AND	ti((Intervention* OR program* OR prevention OR policy OR policies))

3. Search string for SCOPUS and Social Science Citation Index

#	
1	exp developing countries/
2	(Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America).hw,ti,ab,cp.
3	(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 Brasil 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 dIvoire 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 Isle of Man 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 or Sabah or 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 Ifni 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 or 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 South Africa 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).hw,ti,ab,cp.
4	(low adj3 middle adj1 countr*).ti,ab.
5	(lmic or lmics or third world or lami countr*).ti,ab.
6	(transitional countr* or emerging market* or emerging countr*).ti,ab.
7	1 or 2 or 3 or 4 or 5 or 6
8	(Intervention* or program* or prevention or policy or policies).ti,ab.
9	("gender-based" or "gender based" or "intimate-partner" or "intimate partner" or domestic or dating or sexual or physical or emotional or economic or psychological or spousal).ti,ab.
10	(violence or maltreat* or aggress* or assault or beat* or abuse* or batter*).ti,ab.
11	(GBV or IPV or "child marriage" or rape or "violence against women").ti,ab.
12	9 and 10
13	11 or 12
14	7 and 8 and 13
15	("sex work" or "sex workers" or prostitut* or brothel* or ((escort or sex) adj3 buy*) or (commercial adj3 sex*) or (sex adj3 industry) or (heteroflexible or homosexual* or homosexualit* or gay* or MSM or "men who have sex with men" or bisexual)).ab,ti.
16	(stimulant* or polydrug* or drug* or substance).ab,ti.
17	(prison* or jail* or penitentiar* or bastile* or offender* or reoffend* or convict or convicts or convicted or inmate* or detainee* or cellmate* or incarcarated or incarcaration or felon* or criminal* or men or women or male or female).ab,ti.
18	15 or 16 or 17
19	14 and 18
20	7 and 18
21	8 and 13 and 20

Appendix 2 Databases, Conference Abstracts, Websites and Trial Registries

Databases, Conference Abstracts, Websites and Trial Registries

Via the OVID interface	
1.	PsycINFO
2.	MEDLINE
3.	Global Health
Via ProQuest interface	
4.	Dissertation Abstracts
5.	International Bibliography of the Social Sciences (IBSS)
6.	Applied Social Sciences Index Abstracts (ASSIA)
7.	Sociological Abstracts
Others	
8.	Scopus
9.	Social Sciences Citation Index,
10.	Sexual Violence Initiative (SVRI)
11.	International Initiative for Impact Evaluation (3ie)
12.	Knowledge for Health (K4Health)
13.	Google Scholar
Abstract books of conferences	
14.	Sexual Violence Initiative (SVRI) 2009-2017,
15.	AIDS Impact 2003-2017,
16.	International AIDS Conference 2004-2016
Websites	
17.	World Health Organization
18.	UNAIDS
19.	UNWomen
20.	UNFPA
21.	Popline
22.	AIDSAlliance
23.	USAID Development Experience
24.	Clearinghouse and Department For International Development (DFID)
25.	Violence Prevention www.preventviolence.info
26.	UNICEF Office of Research Innocenti
27.	Salamander Trust and WhatWorks
Trial registries	
28.	ClinicalTrials.gov
29.	Pan African Clinical Trials Registry
30.	EU Clinical Trials Registry
31.	Brazilian Clinical Trials Registry
32.	Cuban Public Registry of Clinical Trials
33.	Thai Clinical Trials Registry

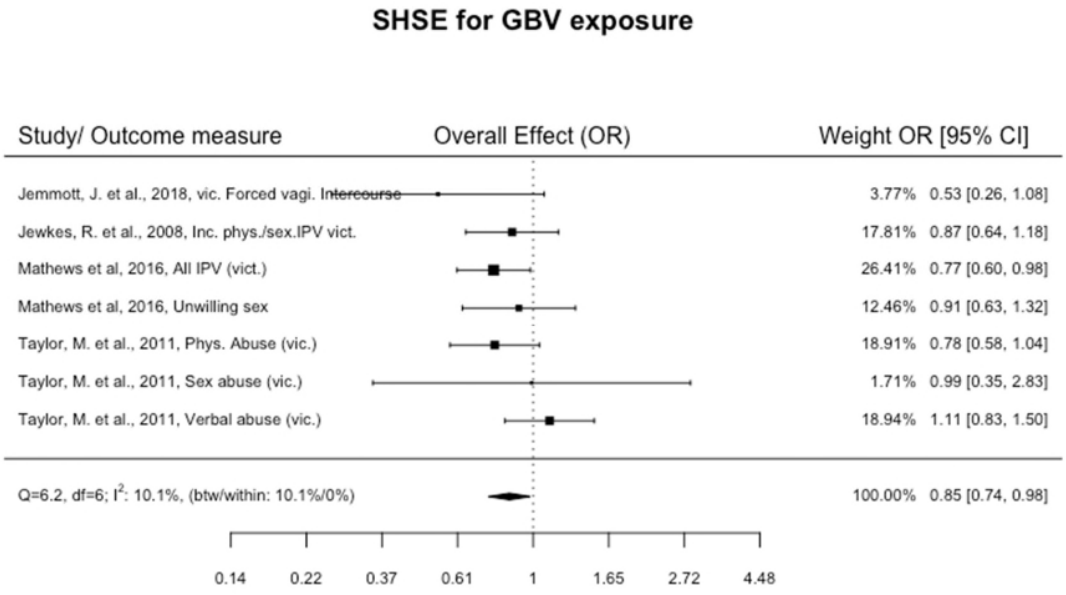
Appendix 3 Information to be Extracted

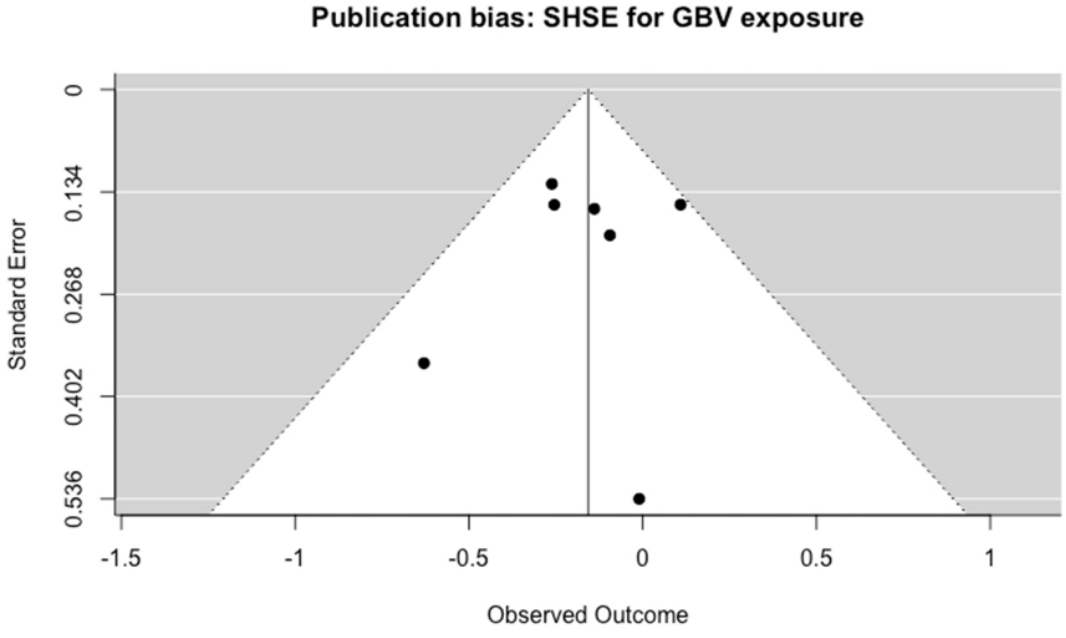
The information was extracted to an extraction sheet with the following columns:

Person Extracting Data	
Ref_ID	
Authors	
Study Design	
Unit of allocation	
Outcome reported sex	
Meta-Analysis Outcome coding overall	
Meta-Analysis Outcome Coding by gender	
Meta-Analysis Outcome coding 1	
Meta-Analysis Outcome coding 2	
Outcome	
Outcome type	
Time points measured	
Time points reported	
Scales: upper and lower limits (indicate if high or low score is good)	
Imputation of mising data	
Power (power & sample size calculation, level of power achieved)	
Assumed risk estimate (e.g. basline or population risk noted in background)	
Length_INT	
Length_FU	
INTERVENTION	Base N
	Base Age Mean (SD/SE)
	Base events
	Base events %
	Base Mean (SD/SE)
	Follow-up N
	FU events
	FU events %
	Post Mean (SD/SE)
	MSC (SD/SE)
CONTROL	Base N
	Base Age Mean (SD/SE)
	Base events
	Base events %
	Base Mean (SD/SE)
	Follow-up N
	FU events
	FU events %
	Post Mean (SD/SE)
	MSC (SD/SE)
Effect size (MD, HR, RR, OR)	
P-value_ES	
N missing particpants	
Reason missing	
Unit of analysis	
Statistical methods used and appropriateness of theses	
Reanalysis required	
Reanalysis possible	
Address reliability/valididty of data analysis	
Data Comments	
Key conclusions of study authors	
Did authors report on all variables they aimed to study? (if no, explain)	
Were adolescents involved in the research or intervention development?	
Risk of bias	Random sequence generation
	Allocation concealment

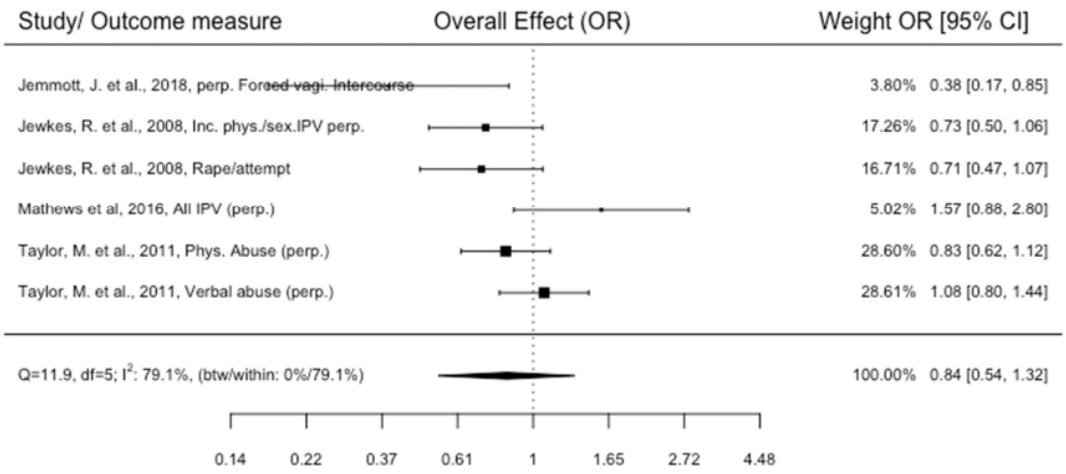
	Blinding of participants and personnel (I)
	Blinding of participants and personnel ©
	Blinding of outcome assessment (I)
	Blinding of outcome assessment ©
	Incomplete outcome data (I)
	Incomplete outcome data ©
	Selective outcome reporting
	Other bias
ROBINS-I	Bias due to counfounding
	Bias in selection of participants in to the study
	Bias in Classification of interventions
	Bias due to deviations from intended interventions
	Bias due to missing data
	Bias in measurement of outcomes
	Bias in selection of reported results

Appendix 4. Meta-Analyses results

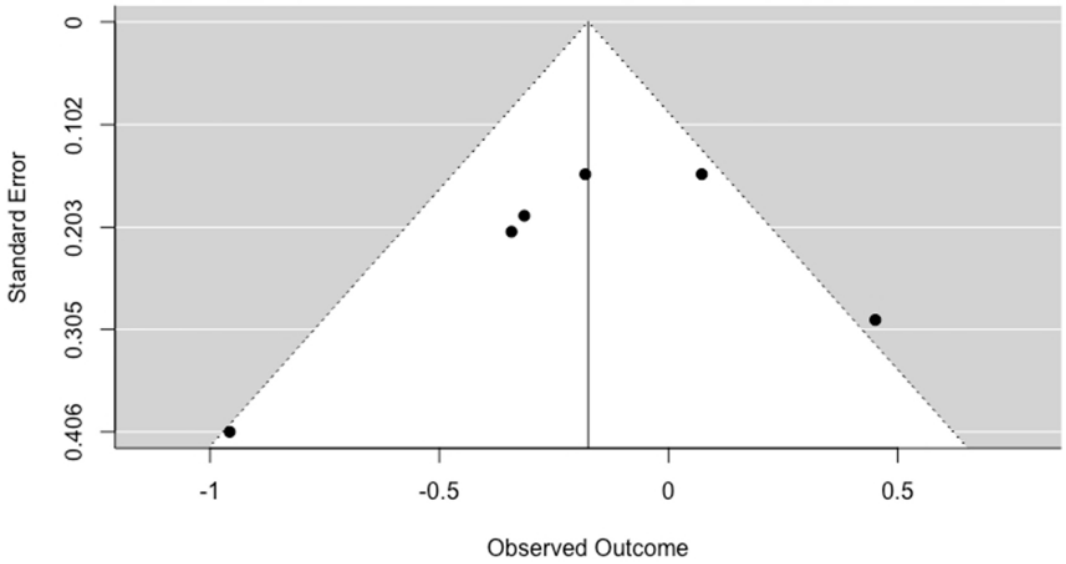




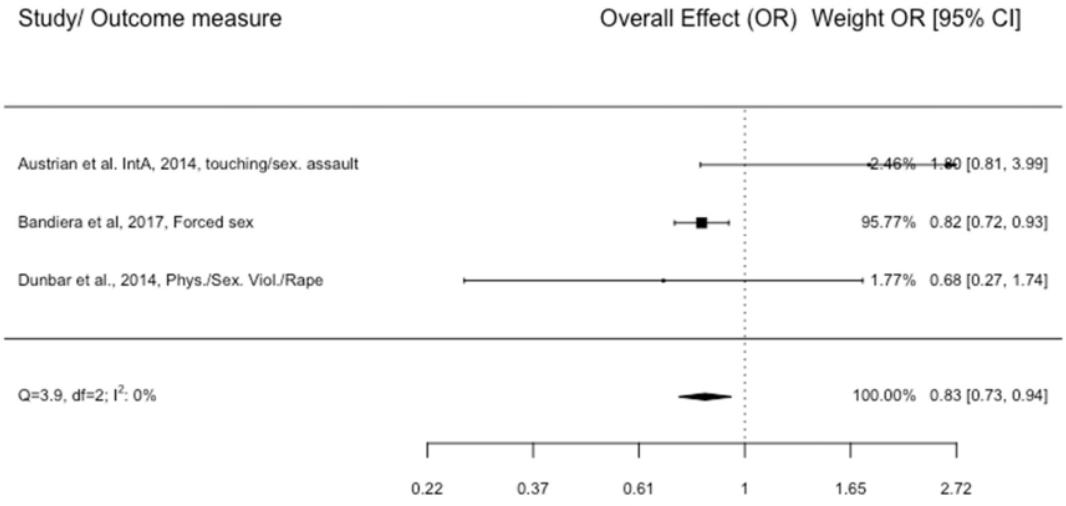
SHSE for GBV perpetration



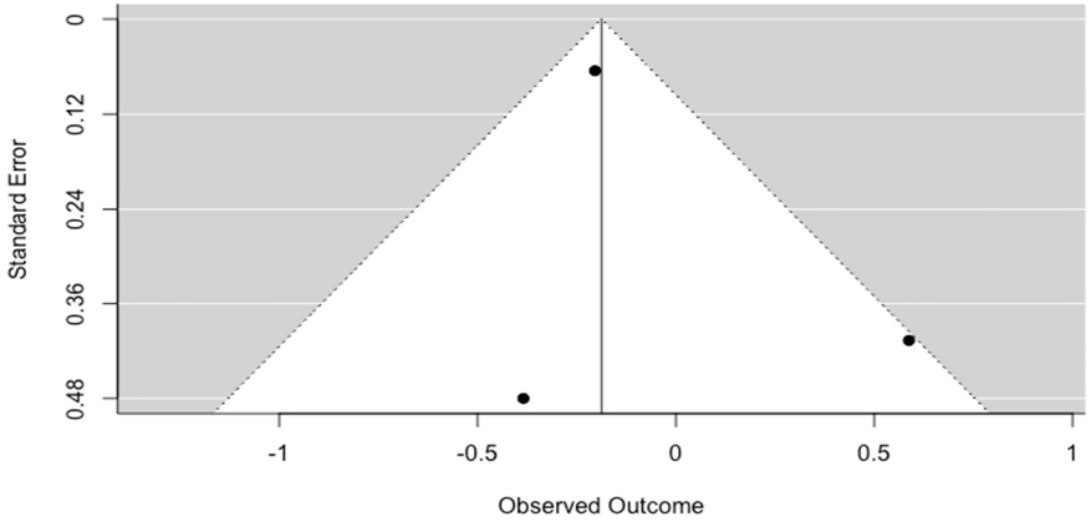
Publication bias: SHSE for GBV perpetration



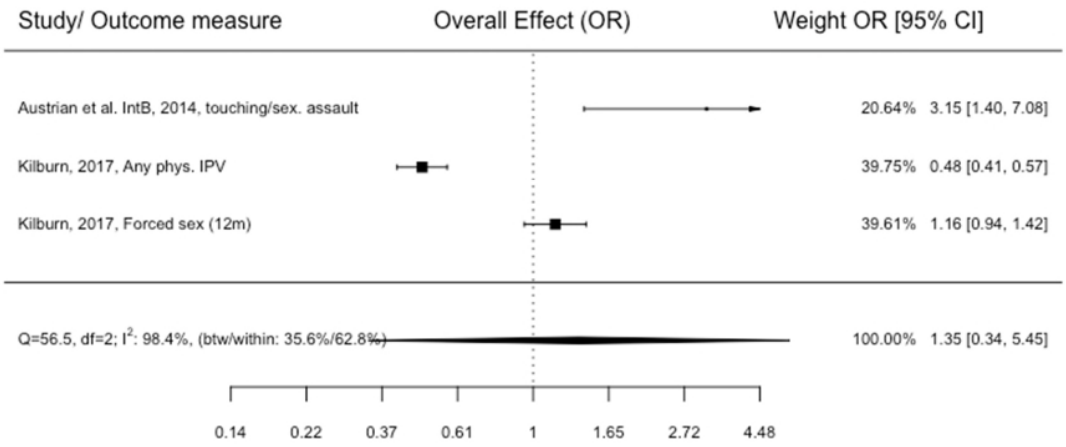
SHSE plus economic strengthening interventions for GBV exposure



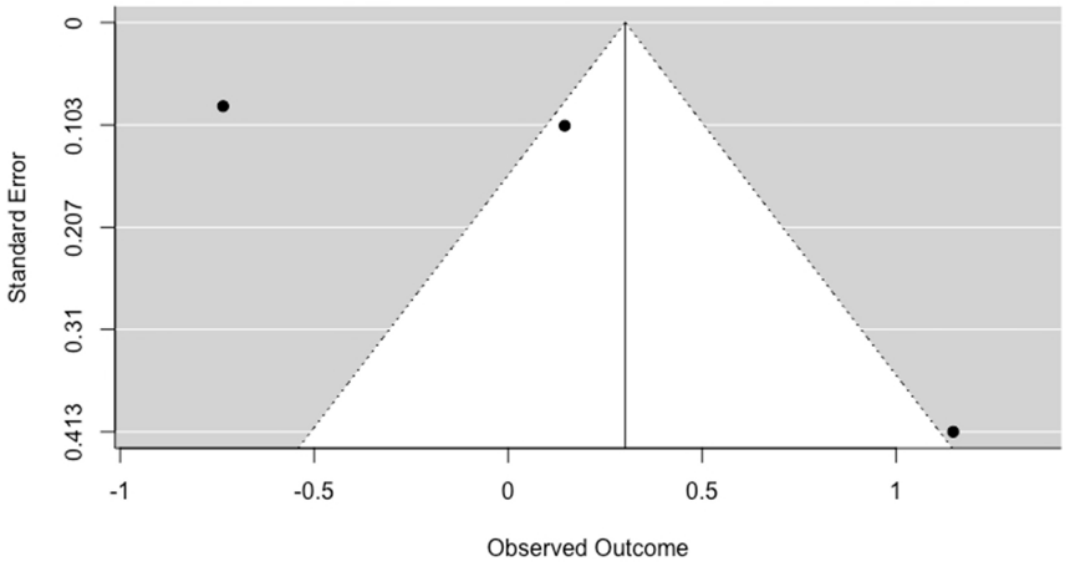
Publication bias: SHSE plus economic strengthening interventions for GBV exposure



Economic only interventions for GBV exposure



Publication bias: Economic only interventions for GBV exposure



Appendix 5. GRADE Evidence Profiles

Meta-analyses:

1. SHSE interventions for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					Importance
							No of patients		Effect		Quality	
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Comprehensive SRHR	Control	Relative (95% CI)	Absolute		
GBV experience												
4	RCTs	Serious[1]	Serious[2]	No serious indirectness	Minor imprecision	Some reporting bias suggested by funnel plot	3988	3561	OR 0.78 (0.65-0.93)		□□□□ LOW	CRITICAL
GBV perpetration												
4	RCTs	Serious[1]	Serious[1]	No serious indirectness	Minor imprecision	Some reporting bias suggested by funnel plot	2958	2876	OR 0.84 (0.54-1.44)		□□□□ LOW	CRITICAL
GBV-related attitudes												
NA												

[1] concerns re blinding of participants, blinding of outcome assessment incomplete outcome data, selective reporting for at least 2 of 4 studies, downgraded by 1

[2] moderate levels of heterogeneity, downgraded by 1

2. SHSE interventions plus economic strengthening for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					
							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Comprehensive SRHR plus Economic strengthening	Control	Relative (95% CI)	Absolute		
GBV experience												
2	RCTs	Serious[1]	Moderate[2]	No serious indirectness	Serious imprecision[3]	Small number of studies	4122	2159		0.83 (0.73-0.94)	□□□□ VERY LOW	CRITICAL
1	NRS	Serious[4]	No serious inconsistency	No serious indirectness	Serious[5]	Small number of studies	451	313			□□□□ VERY LOW	CRITICAL
GBV perpetration												
NA												
GBV-related attitudes												
NA												

[1] concerns about random sequence allocation, allocation concealment, blinding of participants, blinding of outcome measures, incomplete data and selective reporting in at least one of the two studies, downgraded by 1

[2] concerns about effects, one shows positive effect, the other shows no effect

[3] concerns about sample size and size of confidence interval in one of the studies, downgraded 1

[4] concerns about bias due to confounding, selection, in classification of intervention, deviations from intended interventions, missing data, measurement of outcomes and selection of reported results, studies downgraded by 2

[5] small sample size in both studies, wide confidence intervals in one study, downgraded 1

3. Economic strengthening interventions for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					Importance
							No of patients		Effect			
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Economic strengthening	Control	Relative (95% CI)	Absolute	Quality	
GBV experience												
1	RCT	Minor[1]	Serious[2]	No serious indirectness	No serious imprecision		1225	1223	Mean OR 0.82 for two outcomes	1.35 (.34-5.45)	□□□□ MODERATE	CRITICAL
1	NRS	Serious[3]	No serious inconsistency	No serious indirectness	Serious imprecision[4]		300	313	OR 3.15 (1.40-7.08)		□□□□ VERY LOW	CRITICAL
GBV perpetration												
NA												
GBV-related attitudes												
NA												

[1] unclear allocation concealment and other bias

[2] effects of the two outcomes in this study moving in different directions, downgraded 1

[3] moderate or serious risk of bias due to confounding, selection of participants, classification of interventions, deviations from intended interventions, missing data, measurement of outcomes and selection of reported results, downgraded 2

[4] very wide confidence interval

All studies without meta-analysis (following Murad et al, 2017)

4. SHSE interventions for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					Importance
							No of patients		Effect		Quality	
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Comprehensive SRHR	Control	Relative (95% CI)	Absolute		
GBV experience												
GBV perpetration												
1	NRS	Serious[1]	No serious inconsistency	No serious indirectness	Serious imprecision[2]	Unclear event rates	486	159		No significant differences between intervention and control	□□□□ VERY LOW	CRITICAL
GBV-related attitudes												
3	NRS	Serious[3]	Minor inconsistency	No serious indirectness	Serious imprecision[4]	Unclear event rates	1153	1215		Overall potential small increase in gender equitable attitudes	□□□□ VERY LOW	IMPORTANT

[1] moderate to serious risk of bias due to confounding, selection of particpiants missing data, measurement of outcomes and selection of reporting, downgraded 2

[2] very small sample size, downgraded 1

[3] moderate to serious risk of bias due to confounding, selection of particpiants, deviations from intended interventions, missing data, measurement of outcome and selection of reported results, downgraded 2

[4] Wide confidence intervals for one of the studies and small sample sizes for two studies, downgraded 1

5. SHSE interventions plus economic strengthening for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					
							No of patients		Effect			
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Comprehensive SRHR plus economic strengthening	Control	Relative (95% CI)	Absolute	Quality	Importance
GBV experience												
GBV perpetration												
NA												
GBV-related attitudes												
1	NRS	Serious[1]	No serious inconsistency	No serious indirectness	No serious imprecision		326	326	OR 1.30 (1.24-1.37)		□□□□ LOW	IMPORTANT

[1] moderate to serious risk of bias due to confounding, selection of participants, missing data, measurement of outcomes and selection of reported results, downgraded by 2

6. Self-defence for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					Importance
							No of patients		Effect			
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Self-defence	Control	Relative (95% CI)	Absolute	Quality	
GBV experience												
1	RCT	Serious[1]	No serious inconsistency	No serious indirectness	No serious imprecision		3529	2827		3.7% (0.4-8.0) risk reduction	□□□□ MODERATE	CRITICAL
2	NRS	Serious[2]	No serious inconsistency	No serious indirectness	No serious imprecision	One study only gives within group effects	2500	548	OR 0.34 (0.19-0.59)	6.8% risk reduction intervention group, no risk reduction in control group	□□□□ LOW	CRITICAL
GBV perpetration												
NA												
GBV-related attitudes												
NA												

[1] concerns regarding allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete data and selective reporting, downgraded 1

[2] moderate to serious bias due to confounding, election of participants, missing data, measurement of outcomes and selection of reported results, downgraded 2

7. Safer schools for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					Importance
							No of patients		Effect			
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Safer schools	Control	Relative (95% CI)	Absolute	Quality	
GBV experience												
2	RCTS	Serious[1]	Serious[2]	No serious indirectness	Serious[3]	Sample size in one of the interventions unclear[3]	2097+unclear	2041+unclear		No significant changes on outcome	□□□□ VERY LOW	CRITICAL
GBV perpetration												
1	RCT	Serious[4]	No serious inconsistency	No serious indirectness	Unable to judge as no confidence intervals provided	Sample size unclear[5]	Unclear	Unclear		No significant changes on outcome	□□□□ LOW	CRITICAL
GBV-related attitudes												
1	RCT	Serious[4]	No serious inconsistency	No serious indirectness	Unable to judge as no confidence intervals provided	Sample size unclear[5]	Unclear	Unclear		OLS coefficient 0.57 (p=0.019)	□□□□ LOW	IMPORTANT

[1] concerns about random sequence generation, allocation concealment, blinding of participants and outcome assessors, incomplete outcome data and selective reporting on one of the two studies, downgraded 1

[2] Multiple outcomes with effect sizes in different directions, downgraded 1

[3] wide confidence intervals in one of the studies due to small number of events, other study provided no confidence intervals, downgraded 1

[4] concerns about random sequence generation, allocation concealment, blinding of participants and outcome assessors, incomplete outcome data and selective reporting, downgraded 1

[5] downgraded 1

8. GBV sensitization for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					Importance
							No of patients		Effect		Quality	
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	GBV sensitisation	Control	Relative (95% CI)	Absolute		
GBV experience												
1	RCT	Serious[1]	No serious inconsistency	No serious indirectness	No serious imprecision		3529	2827		3.7% (0.4-8.0) risk reduction	□□□□ MODERATE	CRITICAL
GBV perpetration												
NA												
GBV-related attitudes												
1	NRS	Serious[2]	No serious inconsistency	No serious indirectness	No serious imprecision	Only gave within group effects	1543	293	t(1306)=13.51, p<.001		□□□□ LOW	IMPORTANT

[1] concerns regarding allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete data and selective reporting, downgraded 1

[2] moderate or serious risk of bias due to confounding, missing data, measurement of outcomes and selection of reported results, downgraded 2

9. Safer schools and parenting for GBV prevention and reduction among adolescent and youth populations living with, or vulnerable to HIV in LMICS

Quality assessment							Summary of findings					
							No of patients		Effect			
No of studies	Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other considerations	Safer schools and parenting	Control	Relative (95% CI)	Absolute	Quality	Importance
GBV experience												
1	RCT	Serious[1]	No serious inconsistency	No serious indirectness	Unable to judge as no confidence intervals provided	Sample size unclear[2]	Unclear	Unclear		No significant changes on outcome	□□□□ LOW	CRITICAL
GBV perpetration												
1	RCT	Serious[1]	No serious inconsistency	No serious indirectness	Unable to judge as no confidence intervals provided	Sample size unclear[2]	Unclear	Unclear		No significant changes on outcome	□□□□ LOW	CRITICAL
GBV-related attitudes												
1	RCT	Serious[1]	No serious inconsistency	No serious indirectness	Unable to judge as no confidence intervals provided	Sample size unclear[2]	Unclear	Unclear		OLS coefficient 0.20 (p=0.41)	□□□□ LOW	IMPORTANT

[1]concerns about random sequence generation, allocation concealment, blinding of participants and outcome assessors, incomplete outcome data and selective reporting, downgraded 1

[2] downgraded 1

Appendix 6 Included Studies Characteristics

Author names	Study design	Country	Period FU	Analyses used for data	Outcomes measured	Baseline prevalence of violence exposure or perpetration	Baseline mean of Gender Attitudes Score
Austrian, K. et al. (2014)	Quasi-Experimental	Uganda	Immediate post-test (5 to 12 month after enrolment)	Multivariate logistic random-intercept model including interaction terms treatment*time	Indecent touching past 6 months (females only,)	**93/1062 (8.76%)**	NA
Baiocchi, M. et al. (2017)	RCT (Cluster)	Kenya	9m	ITT Boostrap diff-in-diff with an adjustment of the observed proportions in follow-up using a Poisson process approximation	Forced sex past year (females only)	6.9%	NA
Bandiera, M. et al. (2017)	RCT (Cluster, stratified)	Uganda	2y and 4y	ITT OLS ANCOVA controlling for age and community characteristics	Forced sex (females only)	**19%**	NA
Devries, K. et al. (2017)	RCT (Cluster)	Uganda	Immediate post-test (0 to 2 months)	Mixed Effects Regression Models accounting for clustering of students within schools and interaction term sex*study arm	Peers sexual violence in boys –past week	10/1766 (0.05%)	NA
					Peers sexual violence in girls –past week	24/ 2054 (1.2%)	NA
					Peers sexual violence in total – past week	34/3820 (0.89%)	NA
					Peers sexual violence in boys –past term	Prevalence not reported at baseline	
					Peers sexual violence in girls –past term	Prevalence not reported at baseline	
					Peers sexual violence in total – past term	Prevalence not reported at baseline	
					Sexual violence from school staff, past week (boys)	6/1766 (0.34%)	
					Sexual violence from school staff, past week (girls)	15/2054 (0.73%)	
					Sexual violence from school staff, past week (total)	21/3820 (0.55%)	
					Sexual violence from school staff, past term (boys)	Prevalence not reported at baseline	
					Sexual violence from school staff, past term (girls)	Prevalence not reported at baseline	
					Sexual violence from school staff, past term (total)	Prevalence not reported at baseline	

Author names	Study design	Country	Period FU	Analyses used for data	Outcomes measured	Baseline prevalence of violence exposure or perpetration	Baseline mean of Gender Attitudes Score
Dunbar, M. et al. (2014)	RCT	Zimbabwe	6m, 12m, 18m, 24m	ITT Logistic Regression, interaction terms Cox Model	Experience of physical/sexual violence or rape (females)	Prevalence not measured at baseline	NA
Erulkar, A. et al. (2005)	Longitudinal Study	Kenya	Immediate post-test	Difference in Mean T-test	Liberal attitudes to gender issues (females only)	NA	Intervention: 4.6 Control: 4.3 Scale ranged from 1 to 8
Jemmott, J. et al. (2018)	RCT (Cluster)	South Africa	3m, 6m, 12m, 42m and 54m	Poisson regression models, adjusting for gender and students clustered within schools	Forced sex: perpetration lifetime (male)	4/499 (1%)	NA
					Forced sex: perpetration lifetime (female)	1/558 (0%)	
					Forced sex: perpetration lifetime (all)	**5/1057 (0%)**	
					Forced sex: experience lifetime (male)	5/499 (1%)	
					Forced sex: experience lifetime (female)	2/558 (0%)	
					Forced sex: experience lifetime (all)	**7/1057 (1%)**	
Jewkes, R. et al. (2008)	RCT (Cluster)	South Africa	12m and 24m	Random effects logistic regression model, including terms for stratum, age of the respondent, and treatment arm	Incidence of IPV perpetration (males)	**196/1360 (14%)**	NA
					Incidence of IPV exposure (females)	**334/1416 (24%)**	
					Incidence or rape perpetration or attempted rape (male)	**267/1360 (20%)**	
Jewkes, R. et al. (2017)	RCT (Cluster)	South Africa	6m, 12m, 18m	Logistic Regression	Incidence of male IPV perpetration	Prevalence at baseline not provided	NA
					Incidence of female IPV victimization	Prevalence at baseline not provided	NA
					The incidence of severe physical and sexual IPV (males and females)	Prevalence at baseline not provided	NA
					The incidence of non-partner rape victimization and perpetration (males and females)	Prevalence at baseline not provided	NA
					Gender attitudes score measured across 5 items (males and females)	NA	Baseline scores not provided

Author names	Study design	Country	Period FU	Analyses used for data	Outcomes measured	Baseline prevalence of violence exposure or perpetration	Baseline mean of Gender Attitudes Score
Keller, J. et al. (2015)	Quasi-Experimental	Kenya	9m	Logistic regression, t-test Cohen's effect	Male attitudes toward women and endorsement of rape myths	NA	Intervention: 17.78 Control: 21.34 Scale ranged from 7 to 33
Kilburn, K. et al. (2017)	RCT	South Africa	12m	Generalized estimating equation (GEE) models accounting for repeated observations and controlling for age. Risk ratios using log-binomial regressions	Forced sex (ever, female victimization): physically forced to have sex	73/2448 (3%)	NA
					Experience of Physical IPV (ever, female victimization)	415/2448 (17%)	NA
					Experience of Physical IPV (past year, females)	254/2448 (11%)	NA
Mathews et al. (2016)	RCT (Cluster)	South Africa	6m, 12m	Regression analyses adjusting for age, gender, SES and baseline measure of outcome adjusting for clustering. Expectation–maximization algorithm (EM) for missing data	IPV victimization (males and females, past 6 months)	**1258/3449 (36.47%)**	NA
					IPV perpetration (males and females, past 6 months)	**715/3449 (20.73%)**	NA
					Unwilling first sex (males and females)	**111/713 (15.57%)**	NA
Pulerwitz et al. (2015)	Quasi-Experimental	Ethiopia	Immediate post-test	Generalized estimating equations Accounting for paired data, adjusting for respondent clustering among young men with primary partners and controlling for age, GEM score, arm, and time. Included a time by intervention group interaction term.	Male views on gender norms	NA	Arm 1= 59.8 Arm 2 = 58.5 Control=59.9 Scale ranged 1 to 72
					Male IPV perpetration past 6 months (physical and sexual)	Unclear	NA
					Male IPV perpetration past 6 months (physical, sexual and emotional)	53%	NA
Rijsdijk, L. et al. (2011)	Quasi-Experimental	Uganda	Immediate post-test	ANOVA of change. Age, gender and control/intervention variables included as covariates. Interaction terms arm*time	Attitudes towards using force for getting sex (males and females)	NA	Intervention: 3.65 Control: 3.64 Only one item, responses may have ranged 1 to 5 but unclear
Rocha, V. (2013)	Quasi-Experimental	Brazil	Immediate post-test	Wilcoxon and McNemar tests. Multiple regression models to assess the uncontrolled effect of the program; controlled effect; and interaction terms.	Acceptance of domestic violence (females)	**38/273 (14%)**	NA
					Gender equitable attitudes (females)	NA	Intervention: 29.4 (4.3) Control: 30.1 (4.8) Scale ranged from 0 to 42

Author names	Study design	Country	Period FU	Analyses used for data	Outcomes measured	Baseline prevalence of violence exposure or perpetration	Baseline mean of Gender Attitudes Score
Sarnquist, C. et al. (2014)	Cross-sectional study Prospective cohort	Kenya	10.5m	Fisher's Exact Test χ^2 Test	Incidence of sexual assault: rape (female victimization, past year)	**414/2404 (17%)**	NA
Sinclair, J. et al. (2013)	Non-randomised controlled study (census-based, longitudinal cohort study)	Kenya	10m	Fisher's Exact Test χ^2 Test	Incidence of Sexual Violence: Forced sex or rape (female victimization, past year)	128/522 (24.5%)	NA
Taylor, M. et al. (2011)	RCT	South Africa	8m	Logistic Regression accounting for clustering within schools, controlling for age, gender, SES, sexual experience, and baseline scores	Forced sex (female victimization, lifetime)	Prevalence at baseline not reported	NA
					Forced sex (male victimization, lifetime)	Prevalence at baseline not reported	
				Paired Sample T-test	Physical IPV (female victimization	Prevalence at baseline not reported	
					Physical IPV (male victimization)	Prevalence at baseline not reported	
					Physical IPV (female perpetration)	Prevalence at baseline not reported	
					Physical IPV (male perpetration)	Prevalence at baseline not reported	
					Emotional IPV (female victimization)	Prevalence at baseline not reported	
					Emotional IPV (male victimization)	Prevalence at baseline not reported	
					Emotional IPV (female perpetration)	Prevalence at baseline not reported	
					Emotional IPV (male perpetration)	Prevalence at baseline not reported	

Appendix 7 Included Studies References

1. Austrian K, Muthengi E. Can economic assets increase girls' risk of sexual harassment? Evaluation results from a social, health and economic asset-building intervention for vulnerable adolescent girls in Uganda. Children and Youth Services Review. 2014; 47(2): 168-175.
2. Baiocchi M, Omondi B, Langat N, Boothroyd DB, Sinclair J, Pavia L, et al. A Behavior-Based Intervention That Prevents Sexual Assault: the Results of a Matched-Pairs, Cluster-Randomized Study in Nairobi, Kenya. Prevention Science. 2017; 18(7): 818-827.
3. Bandiera O, Buehren N, Burgess RSL, Goldstein MP, Gulesci S, Rasul I, et al. Women's Empowerment in Action: Evidence from a randomized control trial in Africa (English). Washington, D.C.:; 2017.
4. Devries KM, Knight L, Allen E, Parkes J, Kyegombe N, Naker D. Does the Good Schools Toolkit Reduce Physical, Sexual and Emotional Violence, and Injuries, in Girls and Boys equally? A Cluster-Randomised Controlled Trial. Prevention Science. 2017; 18(7): 839-853.
5. Dunbar MS, Dufour MSK, Lambdin B, Imelda Mudekunye-Mahaka DNNSP. The SHAZ! Project: Results from a Pilot Randomized Trial of a Structural Intervention to Prevent HIV among Adolescent Women in Zimbabwe. PLoS ONE. 2014; 9(11): 1-20.
6. Erulkar AS, Chong E. Evaluation of a Savings & Micro-Credit Program for Vulnerable Young Women in Nairobi. New York, USA.:; 2005.
7. Jemmott JB, Jemmott LS, O'Leary A, Ngwane ZP, Teitelman AM, Makiwane MB, et al. Effect of a Behavioral Intervention on Perpetrating and Experiencing Forced Sex Among South African Adolescents. JAMA Network Open. 2018; 1(4): e181213.
8. Jewkes R, Mahlangu P, Chirwa E, Gevers A, Shai N, Shamu S, et al. Skhokho Supporting Success: RCT evaluation of a multi-faceted school-based GBV prevention intervention [Slides]. In SVRI Forum 2017: Partnership for Policy Action; 2017; Rio de Janeiro.
9. Jewkes R, Nduna M, Levin J, Jama N, Dunkle K, Puren A, et al. Impact of Stepping Stones on incidence of HIV and HSV-2 and sexual behaviour in rural South Africa: cluster randomised controlled trial. BMJ. 2008; 337: 1-11.
10. Keller J, Mboya BO, Sinclair J, Githua OW, Mulinge M, Bergholz L, et al. A 6-week school curriculum improves boys' attitudes and behaviors related to gender-based violence in Kenya. Journal of Interpersonal Violence. 2015; 32(4): 535-557.
11. Kilburn KN, Pettifor A, Edwards JK, Selin A, Twine R, MacPhail C, et al. Conditional cash transfers and the reduction in partner violence for young women: an investigation of causal pathways using evidence from a randomized experiment in South Africa (HPTN 068). Journal of the International AIDS Society. 2018; 21(S1): 47-54.
12. Mathews C, Eggers S, Townsend L, Aarø L, de Vries P, Mason-Jones A, et al. Effects of PREPARE, a Multi-component, School-Based HIV and Intimate Partner Violence (IPV) Prevention Programme on Adolescent Sexual Risk Behaviour and IPV: Cluster Randomised Controlled Trial. AIDS and Behavior. 2016; 20(9): 1821-1840.
13. Pulerwitz J, Hughes L, Mehta M, Kidanu A, Verani F, Tewolde S. Changing Gender Norms and Reducing Intimate Partner Results From a Quasi-Experimental Intervention Study With Young Men in Ethiopia. American Journal of Public Health. 2015 January; 105(1): 132-137.
14. Rijsdijk L, Bos A, Ruiter R, Leerlooijer JN, de Haas B, Schaalma HP. The World Starts With Me: A multilevel evaluation of a comprehensive sex education programme targeting adolescents in Uganda. BMC Public Health. 2011; 11(1): 1-12.

15. Rocha V. An Evaluation of Program M in Rio De Janeiro, Brazil: An Analysis of Change in Self-Efficacy in Interpersonal Relationships, Gender Equity, and Self-Reported Risky Behaviors among Women in Two Low-Income Communities (Doctoral dissertation). 2011..
16. Sarnquist C, Omondi B, Sinclair J, Gitau C, Paiva L, Mulinge M, et al. Rape Prevention Through Empowerment of Adolescent Girls. Pediatrics. 2014; 133(5): e1226-e1232.
17. Sinclair J, Sinclair L, Otieno E, Mulinge M, Kapphahn C, Golden NH. A Self-Defense Program Reduces the Incidence of Sexual Assault in Kenyan Adolescent Girls. Journal of Adolescent Health. 2013; 53(3): 374-380.
18. Taylor M, Jinabhai C, Dlamini S, Sathiparsad R, Meyer-Weitz A, Eggers M, et al. P2-482 Evaluating a school based RCT to reduce gender-based violence among high school students in KwaZulu-Natal, South Africa (SA). Journal of Epidemiology & Community Health. 2011; 65(Suppl 1): A354.
18. Taylor M, Jinabhai C, Dlamini S, Sathiparsad R, Meyer-Weitz A, Eggers M, et al. A School Based RCT to Reduce Gender Violence amongst High School Students in KwaZulu-Natal, South Africa [Slides]. In SVRI Forum 2011: Moving the agenda forward; 2011; Cape Town.

Appendix 8 Excluded Studies

Authors	*Title*	Year	Reason for exclusion
Abeid, M. et al.	A community-based intervention for improving health-seeking behavior among sexual violence survivors: a controlled before and after design study in rural Tanzania	2015	Data not available for age group
Abeid, M. et al.	Evaluation of a training program for health care workers to improve the quality of care for rape survivors: a quasi-experimental design study in Morogoro, Tanzania	2016	Not vulnerable to HIV
Abramsky, T. et al.	*Ecological pathways to prevention: how does the SASA! Community mobilisation model work to prevent physical intimate partner violence against women?*	2016	Data not available for age group
Abramsky, T. et al.	*Findings from the SASA! Study: a cluster randomized controlled trial to assess the impact of a community mobilization intervention to prevent violence against women and reduce HIV risk in Kampala, Uganda*	2014	Data not available for age group
Balaji, M. et al.	*The acceptability, feasibility, and effectiveness of a population-based intervention to promote youth health: an exploratory study in Goa, India*	2011	Not vulnerable to HIV
Beattie, T. S. et al.	*Supporting adolescent girls to stay in school, reduce child marriage and reduce entry into sex work as HIV risk prevention in north Karnataka, India: protocol for a cluster randomised controlled trial*	2015	None of the specified outcomes
Beattie, T. S. H. et al.	*Violence against female sex workers in Karnataka state, south India: impact on health, and reductions in violence following an intervention program*	2010	Data not available for age group
Berg, W. et al.	*One Man Can': shifts in fatherhood beliefs and parenting practices following a gender-transformative programme in Eastern Cape, South Africa*	2013	No control group
Bolton, K. et al.	*Self-determined goals in a solution-focused batterer intervention program: Application for building client strengths and solutions*	2016	Not LMIC
Brown, V. et al.	*HIV infection in women: Models of intervention for violence against women*	1995	No GBV intervention
Bryant, R. A. et al.	*Effectiveness of a brief behavioural intervention on psychological distress among women with a history of gender-based violence in urban Kenya: a randomised clinical trial*	2017	None of the specified outcomes
Burnette, C. et al.	*Male Parenting Attitudes and Batterer Intervention*	2017	Not LMIC
Carmichael, K.	*A hospital-based domestic violence program is crucial to keeping women safe*	2013	Not LMIC
Carmody, M. et al.	*Sexual Violence Prevention Educator Training Opportunities and Challenges*	2014	Wrong study design
Cermele, J.	*Men's Violence Against Women: From Prevalence to Prevention*	2007	No GBV intervention
Chandra, V. et al.	*What does not work in adolescent sexual and reproductive health: A review of evidence on interventions commonly accepted as best practices*	2015	No GBV intervention
Chaudhury, S. et al.	*Exploring the potential of a family-based prevention intervention to reduce alcohol use and violence within HIV-affected families in Rwanda*	2016	Data not available for age group
Choo, E. et al.	*"I Need to Hear From Women Who Have 'Been There'": Developing a Woman-Focused Intervention for Drug Use and Partner Violence in the Emergency Department*	2016	Not LMIC
Chowdhury, A. M. R. et al.	*Do poverty alleviation programmes reduce inequities in health? The Bangladesh experience*	2009	Not retrievable
Cohen, R. et al.	*Common Threads: A recovery programme for survivors of gender based violence*	2013	Wrong study design
Cottler, L. et al.	*Feasibility and Effectiveness of HIV Prevention Among Wives of Heavy Drinkers in Bangalore, India*	2010	Not vulnerable to HIV
Cripe, S.M. et al.	*Intimate partner violence during pregnancy: a pilot intervention program in Lima, Peru*	2010	Not vulnerable to HIV
Dartnall, E. et al.	*Harnessing the power of South-South partnerships to build capacity for the prevention of sexual and intimate partner violence*	2017	Wrong study design
Decker, M. et al.	*Gender-based violence against adolescent and young adult women in low- and middle-income countries*	2014	Wrong study design
del Castillo, S. E. et al.	*La implementación de la política pública de salud sexual y reproductiva (SSR) en el Eje Cafetero colombiano: el caso del embarazo adolescente*	2008	No GBV intervention

Authors	*Title*	Year	Reason for exclusion
Doherty, T. et al.	*Effect of home based HIV counselling and testing intervention in rural South Africa: cluster randomised trial*	2013	Data not available for age group
Dolan, C. et al.	*Letting go of the gender binary: Charting new pathways for humanitarian interventions on gender-based violence*	2014	Wrong study design
Ekhtiari, Y. S. et al.	*The effect of an intervention based on the PRECEDE-PROCEED model on preventive behaviors of domestic violence among Iranian high school girls*	2013	Not vulnerable to HIV
Ekhtiari, Y. S. et al.	*Effect of an intervention on attitudes towards domestic violence among Iranian girls.*	2014	Not vulnerable to HIV
Enriquez, M. et al.	*An Intervention to Address Interpersonal Violence Among Low-Income Midwestern Hispanic-American Teens*	2012	Not LMIC
Erulkar, A. et al.	*Evaluation of a reproductive health program to support married adolescent girls in rural Ethiopia*	2014	Not vulnerable to HIV
Erulkar, A. et al.	*Evaluation of a reproductive health program to support married adolescent girls in rural Ethiopia*	2014	Cross-sectional
Falb, K. L. et al.	*Differential impacts of an intimate partner violence prevention program based on child marriage status in rural Cote d'Ivoire*	2015	Data not available for age group
Falb, K. L. et al.	*Evaluating a health care provider delivered intervention to reduce intimate partner violence and mitigate associated health risks: study protocol for a randomized controlled trial in Mexico City*	2014	Protocol
Fawole, O. et al.	*Violence and HIV/AIDS prevention among female out-of-school youths in southwestern Nigeria: lessons learnt from interventions targeted at hawkers and apprentices*	2004	Not vulnerable to HIV
Falb, K. L. et al.	*Creating opportunities through mentorship, parental involvement, and safe spaces (COMPASS) program: multi-country study protocol to protect girls from violence in humanitarian settings*	2016	Protocol
Fawole, O. et al.	*Violence and HIV/AIDS prevention among female out-of-school youths in southwestern Nigeria: lessons learnt from interventions targeted at hawkers and apprentices*	2004	Not retrievable
Fawole, O. et al.	*Evaluation of interventions to prevent gender-based violence among young female apprentices in Ibadan, Nigeria*	2005	Not retrievable
Fawole, O. et al.	*Interventions for violence prevention among young female hawkers in motor parks in south-western Nigeria: a review of effectiveness*	2003	No control group
Foshee, V et al.	*The Effects of the Evidence-Based Safe Dates Dating Abuse Prevention Program on Other Youth Violence Outcomes*	2014	No GBV intervention
Gürkan, Ö.C. et al.	*The effect of a peer education program on combating violence against women: A randomized controlled study*	2017	Not vulnerable to HIV
Gilbert, L. et al.	*Feasibility and preliminary effects of a screening, brief intervention and referral to treatment model to address gender-based violence among women who use drugs in Kyrgyzstan: Project WINGS (Women Initiating New Goals of Safety)*	2017	Not vulnerable to HIV
Gage, A. J. et al.	*Short-term effects of a violence-prevention curriculum on knowledge of dating violence among high school students in Port-au-Prince, Haiti*	2016	Not vulnerable to HIV
Gibbs, A. et al.	*The Stepping Stones and Creating Futures intervention to prevent intimate partner violence and HIV-risk behaviours in Durban, South Africa: study protocol for a cluster randomized control trial, and baseline characteristics*	2017	Protocol
Gilbert, L. et al.	*Feasibility and preliminary effects of a screening, brief intervention and referral to treatment model to address gender-based violence among women who use drugs in Kyrgyzstan: Project WINGS (Women Initiating New Goals of Safety)*	2017	No control group
Glass, N. et al.	*Randomised controlled trial of a livestock productive asset transfer programme to improve economic and health outcomes and reduce intimate partner violence in a postconflict setting*	2017	Data not available for age group
Go, V. and Frangakis, C. et al.	*Effects of an HIV/AIDS peer prevention intervention on sexual and injecting risk behaviours among injecting drug users (IDU) and their risk partners in Thai Nguyen, Vietnam: a randomized controlled trial*	2012	No GBV intervention
Gondolf, E. et al.	*Nonphysical abuse among batterer program participants*	2002	Not LMIC
Gondolf, E. et al.	*The Program Effect of Batterer Programs in Three Cities*	2001	Not LMIC
Gonzalez-Guarda, R. et al.	*Examining the Preliminary Efficacy of a Dating Violence Prevention Program for Hispanic Adolescents*	2015	Not LMIC

Authors	*Title*	Year	Reason for exclusion
Greig, A. et al.	*Gender and AIDS: time to act*	2008	Wrong study design
Grunke-Horton, K. et al.	*Impact of a Grassroots Property Rights Program on Women's Empowerment in Rural Kenya*	2017	No control group
Gupta, J. et al.	*Gender norms and economic empowerment intervention to reduce intimate partner violence against women in rural Cote d'Ivoire: a randomized controlled pilot study*	2013	Data not available for age group
Haberland, N. et al.	*Sexuality education: Emerging trends in evidence and practice*	2014	Wrong study design
Hatcher, A. et al.	*Intimate partner violence and engagement in HIV care and treatment among women: a systematic review and meta-analysis*	2015	Wrong study design
Jalal, C. et al.	*Effects of BRAC's poverty reduction program targeting the ultra-poor in rural Bangladesh*	2008	Not vulnerable to HIV
Jewkes, R. et al.	*Stepping Stones and Creating Futures intervention: shortened interrupted time series evaluation of a behavioural and structural health promotion and violence prevention intervention for young people in informal settlements in durban, South Africa*	2014	Data not available for age group
Jones, D. et al.	*Risk reduction among HIV-seroconcordant and -discordant couples: The Zambia NOW2 intervention*	2014	Data not available for age group
Kacanek, D. et al.	*Intimate partner violence and condom and diaphragm nonadherence among women in an HIV prevention trial in southern Africa*	2013	None of the specified outcomes
Kachaeva, M.	*Prevention of Violence Against Women in Russia*	2010	No GBV intervention
Kajula, L. et al.	*Vijana Vijiweni II: a cluster-randomized trial to evaluate the efficacy of a microfinance and peer health leadership intervention for HIV and intimate partner violence prevention among social networks of young men in Dar es Salaam*	2016	Protocol
Kalichman, S. C. et al.	*Randomized community-level HIV prevention intervention trial for men who drink in South African alcohol-serving venues*	2014	None of the specified outcomes
Kalichman, S. C. et al.	*HIV/AIDS risk reduction and domestic violence prevention intervention for South African men*	2008	No control group
Kim, J. C. et al.	*Understanding the impact of a microfinance-based intervention on women's empowerment and the reduction of intimate partner violence in South Africa*	2007	Data not available for age group
Kalichman, S. et al.	*Integrated gender-based violence and HIV Risk reduction intervention for South African men: results of a quasi-experimental field trial*	2009	Data not available for age group
Karmaliani, R. et al.	*Violence against women in Pakistan: Contributing factors and new interventions*	2012	Wrong study design
Karmaliani, R. et al.	*Meeting the 2015 Millennium Development Goals with new interventions for abused women*	2011	Wrong study design
Kim, J. C. et al.	*Understanding the impact of a microfinance-based intervention on women's empowerment and the reduction of intimate partner violence in South Africa*	2007	Data not available for age group
Hanson, K. et al.	*A Longitudinal Evaluation of the Effectiveness of a Sexual Assault Education Program*	1999	Not LMIC
Lazarevich, I. et al.	*Dating Violence in Mexican College Students: Evaluation of an Educational Workshop*	2017	Not vulnerable to HIV
Krishnan, S. and Padian, N.S. et al.	*Impact of a workplace intervention on attitudes and practices related to gender equity in Bengaluru, India*	2016	Not vulnerable to HIV
Krishnan, S. and Srinivasan, K. et al.	*Minimizing risks and monitoring safety of an antenatal care intervention to mitigate domestic violence among young Indian women: The Dil Mil trial*	2012	Not vulnerable to HIV
Krishnan, S. et al.	*An intergenerational women's empowerment intervention to mitigate domestic violence: results of a pilot study in Bengaluru, India*	2012	No control group
L'Engle, K. L. et al.	*A randomized controlled trial of a brief intervention to reduce alcohol use among female sex workers in Mombasa, Kenya*	2014	Data not available for age group
Lazarevich, I. et al.	*Dating Violence in Mexican College Students: Evaluation of an Educational Workshop*	2017	Not vulnerable to HIV
Lima, D. et al.	*Revisão crítica sobre o atendimento a homens autores de violência doméstica e familiar contra as mulheres*	2011	Wrong study design
Lippman, S. et al.	*Community mobilization for HIV testing uptake: Results from a community randomized trial of a theory-based intervention in rural South Africa*	2017	Data not available for age group

Authors	*Title*	Year	Reason for exclusion
Love, A. et al.	*"Strength at Home" Intervention for Male Veterans Perpetrating Intimate Partner Aggression: Perceived Needs Survey of Therapists and Pilot Effectiveness Study*	2015	Not LMIC
Matseke, G. et al.	*Screening and brief intervention for intimate partner violence among antenatal care attendees at primary healthcare clinics in Mpumalanga Province, South Africa*	2013	No control group
Mohlala, B. et al.	*Optimising the impact of prevention of mother-to-child transmission of hiv in south africa: the forgotten half of the equation*	2009	Not retrievable
Moor, Avigail, PhD.	*The Efficacy of a High School Rape Prevention Program in Israel*	2011	Not vulnerable to HIV
Moore, L. et al.	*Community empowerment and involvement of female sex workers in targeted sexual and reproductive health interventions in Africa: a systematic review*	2014	Wrong study design
Moreira, G. et al.	*Programa Bolsa Família e violência doméstica contra a mulher no Brasil*	2016	Not vulnerable to HIV
Nanda, P. et al.	*Making Change from Cash? Evaluation of a Conditional Cash Transfer Program to Improve the Status of Girls in Northern India.Â*	2015	Not vulnerable to HIV
Ngidi, N. et al.	*Using transformative pedagogies for the prevention of gender-based violence: reflections from a secondary school-based intervention*	2015	No control group
Orchowski, L. et al.	*Evaluation of a sexual assault risk reduction and self-defense program: A prospective analysis of a revised protocol*	2008	Not LMIC
Pallitto, C. et al.	*Testing a counselling intervention in antenatal care for women experiencing partner violence: a study protocol for a randomized controlled trial in Johannesburg, South Africa*	2016	Protocol
Parcesepe, A. M. et al.	*The impact of an alcohol harm reduction intervention on interpersonal violence and engagement in sex work among female sex workers in Mombasa, Kenya: results from a randomized controlled trial*	2016	Data not available for age group
Peacock, D. et al.	*The Men as Partners Program in South Africa: reaching men to end gender-based violence and promote sexual and reproductive health*	2004	Wrong study design
Pezzullo, S.	*Thinking about tomorrow. The IAF and youth programs in Latin America and the Caribbean*	1994	No GBV intervention
Pick, S. et al.	*"I want to I can...Prevent violence": Raising awareness of dating violence through a brief intervention*	2010	Not vulnerable to HIV
Pronyk, P. M. et al.	*Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial*	2006	Data not available for age group
Pronyk, P. M. et al.	*A combined microfinance and training intervention can reduce HIV risk behaviour in young female participants*	2008	None of the specified outcomes
Pulerwitz, J. et al.	*Addressing gender dynamics and engaging men in HIV programs: Lessons learned from horizons research*	2010	Wrong study design
Read-Hamilton, S. et al.	*The Communities Care programme: changing social norms to end violence against women and girls in conflict-affected communities*	2016	Not vulnerable to HIV
Richter, N.L. et al.	*Group work intervention with female survivors of childhood sexual abuse*	1997	No GBV intervention
Rivas, C. et al.	*Advocacy interventions to reduce or eliminate violence and promote the physical and psychosocial wellbeing of women who experience intimate partner abuse: a systematic review*	2016	Wrong study design
Rivas, C. et al.	*Advocacy interventions to reduce or eliminate violence and promote the physical and psychosocial well-being of women who experience intimate partner abuse*	2015	Wrong study design
Rosenberg, N. et al.	*Recruiting male partners for couple HIV testing and counselling in Malawi's option B+ programme: an unblinded randomised controlled trial*	2015	None of the specified outcomes
Saggurti, N. et al.	*Impact of the RHANI Wives intervention on marital conflict and sexual coercion*	2014	Not vulnerable to HIV
Santos, A. et al.	*Effectiveness of a Group Intervention Program for Female Victims of Intimate Partner Violence*	2017	Not LMIC
Skeen, S. et al.	*Interventions to improve psychosocial well-being for children affected by HIV and AIDS: a systematic review*	2017	Wrong study design
Taft, C. et al.	*"Strength at Home" Group Intervention for Military Populations Engaging in Intimate Partner Violence: Pilot Findings*	2013	Not LMIC

Authors	*Title*	Year	Reason for exclusion
Taghdisi, M. H. et al.	*The impact of educational intervention based on empowerment model in preventing violence against women*	2014	Not vulnerable to HIV
Thilini, H. et al.	*Evaluation of a health promotion intervention in changing the acceptance of gender roles among women in a rural community in Sri Lanka*	2012	Not vulnerable to HIV
Thomas, J.	*Women Married by Age 18 May Receive Reduced Benefits from Partner Violence-Reduction Programs*	2015	No control group
Tiwari, A. et al.	*Effect of an advocacy intervention on mental health in Chinese women survivors of intimate partner violence: a randomized controlled trial*	2010	Not vulnerable to HIV
Tol, W. et al.	*An integrated intervention to reduce intimate partner violence and psychological distress with refugees in low-resource settings: Study protocol for the Nguvu cluster randomized trial*	2017	Protocol
Tollefson, D. et al.	*A Mind-Body Bridging Treatment Program for Domestic Violence Offenders: Program Overview and Evaluation Results*	2015	Not LMIC
Tsai, L. C. et al.	*The impact of a microsavings intervention on reducing violence against women engaged in sex work: a randomized controlled study*	2016	Data not available for age group
Valencia, A. et al.	*Domestic violence program descriptions*	1999	Wrong study design
van den Berg, W. et al.	*'One Man Can': shifts in fatherhood beliefs and parenting practices following a gender-transformative programme in Eastern Cape, South Africa*	2013	Wrong study design
Verma, R. et al.	*Promoting Gender Equity as a Strategy to Reduce HIV Risk and Gender-based Violence Among Young Men in India.Â*	2008	Not vulnerable to HIV
Verma, R. et al.	*Challenging and Changing Gender Attitudes among Young Men in Mumbai, India*	2006	Not vulnerable to HIV
Vonarx, N.	*Masculinity and HIV-AIDS prevention in West Africa: a training model*	2008	Not retrievable
Wagman, J. A. et al.	*Effectiveness of an integrated intimate partner violence and HIV prevention intervention in Rakai, Uganda: analysis of an intervention in an existing cluster randomised cohort*	2015	Data not available for age group
Wagman, J. A. et al.	*Process evaluation of the SHARE intervention for preventing intimate partner violence and HIV infection in Rakai, Uganda*	2018	Wrong study design
Watts, C. et al.	*The SASA! study: a cluster randomised trial to assess the impact of a violence and HIV prevention programme in Kampala, UgandaÂ*	2015	Wrong study design
Wechsberg, W. et al.	*A brief intervention for drug use, sexual risk behaviours and violence prevention with vulnerable women in South Africa: a randomised trial of the Women's Health CoOp*	2013	Data not available for age group
Wechsberg, W. et al.	*Substance use, sexual risk, and violence: HIV prevention intervention with sex workers in Pretoria*	2006	Data not available for age group
Wechsberg, W. et al.	*Effectiveness of an Adapted Evidence-Based Woman-Focused Intervention for Sex Workers and Non-Sex Workers: the Women's Health Coop in South Africa*	2011	Data not available for age group
Welbourn, A.	*Stepping Stones and young people: Seeking cross-sectorial positive outcomes in social norms change lessons from around the world [Slides]*	2017	Not retrievable