

Gender-transformative programming with men and boys to improve sexual and reproductive health and rights: a systematic review of intervention studies

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ABSTRACT

Background Global health organisations advocate gender-transformative programming (which challenges gender inequalities) with men and boys to improve sexual and reproductive health and rights (SRHR) for all. We systematically review evidence for this approach.

Methods We previously reported an evidence-and-gap map (<http://srhr.org/masculinities/wbincome/>) and *systematic review of reviews* of experimental intervention studies engaging men/boys in SRHR, identified through a Campbell Collaboration published protocol (<https://doi.org/10.1002/CL2.203>) without language restrictions between January 2007 and July 2018. Records for the current review of intervention studies were retrieved from those systematic reviews containing one or more gender-transformative intervention studies engaging men/boys. Data were extracted for intervention studies relating to each of the World Health Organization (WHO) SRHR outcomes. Promising programming characteristics, as well as underused strategies, were analysed with reference to the WHO definition of gender-transformative programming and an established behaviour change model, the COM-B model. Risk of bias was assessed using *Cochrane Risk of Bias tools*, RoB V.2.0 and *Risk of Bias In Non-randomised Studies of Interventions*.

Findings From 509 eligible records, we synthesised 68 studies comprising 36 randomised controlled trials, n=56 417 participants, and 32 quasi-experimental studies, n=25 554 participants. Promising programming characteristics include: multicomponent activities of education, persuasion, modelling and enablement; multilevel programming that mobilises wider communities; targeting both men and women; and programmes of longer duration than three months. Six of the seven interventions evaluated more than once show efficacy. However, we identified a significant risk of bias in the overall available evidence. Important gaps in evidence relate to safe abortion and SRHR during disease outbreaks.

Conclusion It is widely acknowledged by global organisations that the question is no longer *whether* to include boys and men in SRHR but *how* to do so in ways that promote gender equality and health for all and are scientifically rigorous. This paper provides an evidence base to take this agenda for programming and research forward.

Key questions

What is already known?

- The Cairo and Beijing conferences, some 25 years ago, fundamentally shifted thinking on sexual and reproductive health and rights (SRHR) towards gender-transformative programming which challenges gender inequalities.
- However, a recently published evidence-and-gap map of experimental research (<http://srhr.org/masculinities/wbincome/>) identified that male engagement in gender-transformative programming in SRHR remains relatively neglected and requires development.

What are the new findings?

- Four promising programming characteristics of effective gender-transformative interventions with men and boys were identified.
 - I. *Multicomponent activities* including *education, persuasion, modelling and enablement* approaches that cover all elements of the COM-B model for successful behaviour change interventions: capability, motivation and opportunity.
 - II. *Multilevel programming* that reaches beyond target groups and mobilises the wider community to adopt egalitarian gender norms and practices.
 - III. *Working with both women and men*, either in mixed sex groups or separately.
 - IV. *Delivery* of activities by trained facilitators and for a sufficient duration of time, ideally longer than three months.
- The vast majority of available evidence relates to preventing violence against women and girls, and no studies were identified that focussed on two of the seven WHO-SRHR outcome domains, *preventing unsafe abortion* and *SRHR in disease outbreaks*.

INTRODUCTION

Engaging men/boys alongside women/girls in gender-transformative programming designed to challenge gender inequality is recognised as an integral part of global

Key questions

What do the new findings imply?

- ▶ This systematic review will be a springboard to advance effective male engagement in gender-transformative programming in SRHR through its identification of promising programming mechanisms, as well as underused strategies and research gaps.
- ▶ This review is contributing to a global research agenda setting exercise being conducted by WHO to advance the field.

strategy to achieve the Sustainable Development Goals of gender equality and health for all.¹ According to the WHO definition, a gender-transformative approach 'seeks to challenge gender inequality by transforming harmful gender norms, roles and relations through programmatic inclusion of strategies to foster progressive changes in power relationships between women and men'² as a means to achieve health for all. However, a recent evidence-and-gap map and systematic review of reviews of all experimental evaluation studies of interventions engaging men and boys in sexual and reproductive health and rights (SRHR) showed that only 8% of review evidence relating to the engagement of men and boys applied a gender-transformative approach to such engagement.^{3 4}

To inform the development of gender-transformative programming with men and boys to improve SRHR, it is necessary to identify the effective characteristics of current gender-transformative programmes, to assess the quality of available evidence and to specify the gaps in current evidence. The aim of this review is to synthesise the evidence on gender-transformative programmes engaging with men and boys in the context of SRHR. The objectives are to identify the:

- ▶ Programme characteristics of gender-transformative interventions with men and boys to improve SRHR, including those programme mechanisms that have shown efficacy in more than one intervention evaluation;
- ▶ Methodological quality of studies of gender-transformative male engagement programmes;
- ▶ Gaps in evidence on gender-transformative male engagement programming.

METHODS

Search strategy and study selection

First, an evidence-and-gap map and systematic review of reviews was conducted and reported elsewhere to identify all systematic reviews of programmes engaging men and boys in SRHR (n=462), and to specifically identify a subset of those reviews which contained at least one explicitly *gender-transformative* programme evaluation study engaging men and boys to improve SRHR (n=39).^{3 4} Systematic reviews published between 1 January 2007 and 31 July 2018 were retrieved for the original review of reviews through a Campbell Collaboration registered and published protocol,³

detailing the search strategy with no language restrictions (see online supplemental file 1).

Second, using the identified subset of 39 systematic reviews that included at least one gender-transformative programme evaluation study engaging men and boys in SRHR, the content and reference lists of each of these reviews was searched to retrieve the original intervention studies. Inclusion criteria were experimental evaluation studies and associated process evaluations of interventions using a gender-transformative approach engaging men and boys to improve SRHR (see online supplemental file 2 for reference list of included studies). Based on the WHO definition, gender-transformative programmes were specified as those that included ways to transform harmful gender norms, or gender practices, or gender inequality, and/or addressed the causes of gender-based inequities within the programmes.²

Two authors conducted double-blind independent screening of 10% of the full-text articles (ER-M, KG), and discussion of categorisation variance with a third author (ML). Thereafter, the remaining articles were divided equally and each author continued to screen full-texts independently. Data extraction forms (see online supplemental file 3) were designed based on Cochrane guidance on evidence synthesis and extracted using DistillerSR software.⁵

Analysis and reporting

The extracted studies were reviewed in accordance with structured assessment criteria with respect to *intervention characteristics, risk of bias/methodological quality, categorisation of outcomes and identification of gaps in evidence*. Four researchers working in pairs (ER-M, KG; ML, AA) coded the studies independently. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2009 checklist⁶ is provided to summarise reporting standards of this review (online supplemental file 4).

Programme characteristics

Programme characteristics were first categorised according to *programme approach* (delivery setting and delivery method), second, *gender-transformative components* and third, *behaviour change mechanisms*. Analysis of all programme components was conducted for all studies prior to conducting a deeper analysis of identified effective programmes evaluated more than once.

Gender-transformative components of each programme were categorised according to core elements in the operational definition published by WHO²: (i) transforming harmful gender norms or practices or gender-based inequalities at an *individual or group level* and (ii) transforming unequal gender norms, practices or gender-based inequalities *through a more structural dimension and targeting underlying causes* (ie, through implementing changes that impact the social norms, physical or regulatory environments in communities, institutions or at the policy level).

Behaviour change mechanisms applied in the included interventions were matched to the *behaviour change wheel* (BCW) by Michie *et al.*⁷ The BCW distinguishes two layers of behaviour change mechanisms: intervention functions and policy categories. The intervention functions are: education, persuasion, incentivisation, coercion, training, restriction, environmental restructuring, modelling and enablement. The policy-level categories of the model are: large-scale communication/marketing, guidelines, social planning, legislation, service provision, regulation and fiscal measures. At the centre of the model, the BCW identifies the sources of the behaviour that could prove fruitful targets for intervention change-mechanisms known as the COM-B model of behaviour change: ‘capability’, ‘opportunity’, ‘motivation’ and ‘behaviour’. An image of the BCW may be viewed here (<http://www.behaviourchangewheel.com/>).⁸

Risk of bias

Risk of bias was assessed using the *Cochrane Risk of Bias tool* (RoB V.2.0)⁹ for randomised controlled trials and an adaptation of the *Risk of Bias In Non-randomised Studies of Interventions*¹⁰ tool for quasi-experimental studies (online supplemental file 5).

Categorisation of outcomes and identification of gaps in SRHR programming

Intervention studies were categorised according to SRHR outcomes of the WHO Reproductive Health Strategy¹¹:

1. Helping people realise their desired family size
2. Ensuring the health of pregnant women/girls and their new-born infants.
3. Preventing unsafe abortion.
4. Promoting sexual health and well-being.
5. Promoting sexual and reproductive health (SRH) in disease outbreaks.
6. Promoting healthy adolescence for a healthy future.
7. Preventing and responding to violence against women/girls.

The measures used to study the SRHR outcomes were categorised as: *attitudinal*, *behavioural* and *biological*. The first two categories were based on self-reported attitudes and behaviours.

Patient and public involvement

Generating improved programming and evaluation requires consultation and collaboration with experts working on gender equality programming in public health.¹² The impetus for this systematic review came from advice received from the Gender and Rights Advisory Panel of the WHO’s Department of Reproductive Health and Research, which includes the UNDP-UNFPA-UNICEF-WHO-World Bank Special Programme of Research, Development and Research Training in Human Reproduction. The Gender and Rights Advisory Panel provides critical advice on shaping the department’s portfolio on gender equality and SRHR, including on engaging men and boys. Preliminary conclusions of

this review were discussed with a wider WHO convened stakeholder group as the first stage of a global research priorities setting exercise for this field.

RESULTS

The evidence-and-gap map (<http://srhr.org/masculinities/wbincome/>) contained 462 systematic reviews, of which 39 included studies which used a gender-transformative approach.^{3,4} The reference lists of these 39 reviews contained 509 total records (intervention studies), of which 334 were identified as duplicates and removed. The remaining studies were evaluated according to inclusion/exclusion criteria to produce a final collection of 68 studies for review. The flow of search and refinement is displayed in [figure 1](#).

The 68 studies comprised 36 RCTs (n=56 417 participants) and 32 quasi-experimental studies (n=25 554 participants). The number of studies conducted in low-income countries and middle-income countries (LMICs) combined is roughly equal to those conducted in high-income countries (HIC) ([figure 2](#)). This is owing to a shift over time to a growing number of studies conducted in LMICs. See [table 1](#) for list of included studies.

Key finding 1: Community mobilisation and education is the most common type of male engagement gender-transformative programmatic approach

The most common approach was *Community Mobilisation and Education Programmes* (n=17 studies or 25%), followed by *School or after-school Education Programmes* (n=15, 22%) followed by *Court-mandated Batterers Programmes* (n=12, 18%).

The remaining types of programming approaches included in studies were *Community Education Programmes* (n=9, 13%); *College/University based Educational Programmes* (n=5, 7%); *Community Health Outreach Programmes* (n=4, 6%); *Community Health Centre health/parenting Promotion Programmes* (n=3, 5%) and *Sports-based Educational Outreach Programmes* (n=3, 5%).

Interventions were slightly more likely to be delivered to both women and men, either separately as single sex groups or together as mixed sex groups, than to men only. Interventions were equally likely to be delivered by trained professionals/facilitators or by peers with overlap of delivery agents throughout many interventions. The modal intervention dosage period was under three months. Only in nine studies were interventions delivered for longer than 12 months and these were largely Community Mobilisation and Education Programmes ([table 2](#)).

Key finding 2: Few gender-transformative interventions addressed unequal power relations at the structural level

All of the intervention studies intentionally focused on *transforming harmful gender norms, practices or inequalities either among individuals or groups* (n=68). A smaller number (n=17) of interventions, all of which were either Community Mobilisation and Education Programmes;

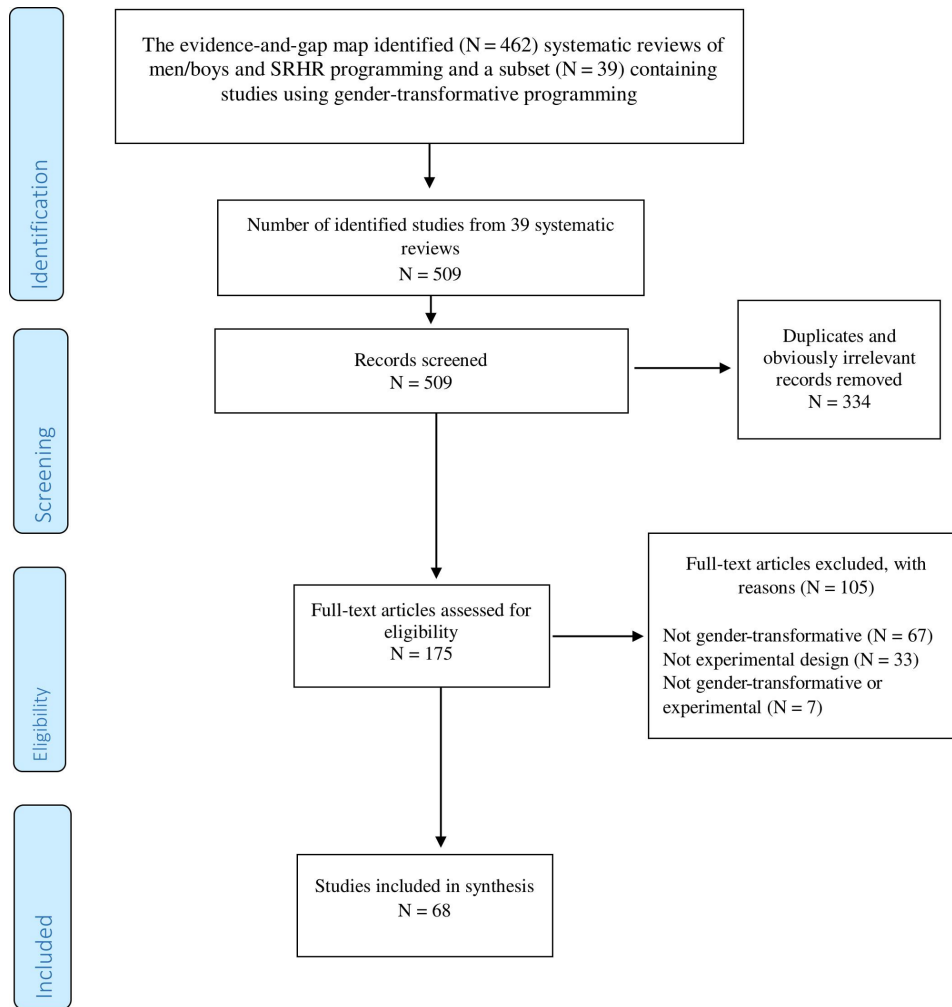


Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow. SRHR, sexual and reproductive health and rights.

School or after-school based Educational Programmes, or Community Health Outreach Programmes included ways of *transforming unequal gender relations at the structural level*. Interventions were placed in this category *when they extended their reach beyond the individual or group context and targeted the intervention to impacting the social norms,*

physical or regulatory environments of the wider community, institutions or at the policy level.

The predominance of gender-transformative interventions targeting the individual or group level was further triangulated by categorising interventions according to the COM-B model behaviour change



Figure 2 Country of origin and World Bank Classification for included intervention studies.

Table 1 Included study information

Author	Year	World Bank category	Country	Funder	Sex		Total participants (n=)	Risk of bias (RCT or QE)
					Intervention	Study		
Abramsky	2014	LIC	Uganda	Irish Aid; Sigrid Rausing Trust; 3ie; AusAID; Stephen Lewis Foundation; American Jewish World Service; HIVOS; NoVo Foundation	M+F	M+F	Baseline: 1583; Endline: 2532	Some concerns (RCT)
Abramsky	2016	LIC	Uganda	See above	M+F	M+F	Baseline: 1583; Endline: 2532	Some concerns (RCT)
Achyt	2011	MIC	India	John D. and Catherine T. MacArthur Foundation; Nike Foundation	M+F	M+F	Baseline: 2896; Follow-up: 203; Endline: 754	Serious (QE)
Ara	2010	LIC	Bangladesh	BRAC & international partners	M+F	M+F	Baseline: 1534; Endline: 797	Moderate (QE)
Ashburn	2017	LIC	Uganda	USAID; Oak Foundation	M (small amount of female partner involvement)	M	Baseline: 435; Endline: 400	Serious (QE)
Avery-Leaf	1997	HIC	USA	NIMH	M+F	M+F	Baseline: 193; Endline: 193	Moderate (QE)
Baiocchi	2017	MIC	Kenya	Ujamaa-Africa	M+F	F	Baseline: 5686; Endline: 6106	High (RCT)
Bartel	2010	MIC	India	Ford Foundation	M+F	F	Baseline: 663; Endline: 668	Serious (QE)
CAREInternational	2012	MIC, HIC	Bosnia and Herzegovina, Serbia, Croatia	CARE International North West Balkans	M	M	>100	Serious (QE)
Chamroonsawasdi	2010	MIC	Thailand	WHO	M+F	M+F	Baseline: 530; Endline: 530	Serious (QE)
Chege	2004	LIC, MIC	Ethiopia, Kenya	USAID	M+F	M+F	Baseline: 2259; Endline: 2240	Serious (QE)
Cowan	2010	MIC	Zimbabwe	NIMH; DfID Zimbabwe	M+F	M+F	Baseline: 6791; Endline: 4684	High (RCT)
Daniel	2008	MIC	India	David and Lucile Packard Foundation	M+F	F	Baseline: 1995; Endline: 2080	Moderate (QE)
Das	2012	MIC	India	NIKE Foundation	M	M	610	Serious (QE)

Continued

Table 1 Continued

Author	Year	World Bank category	Country	Funder	Sex		Total participants (n=)	Risk of bias (RCT or QE)
					Intervention	Study		
Davis	2000	HIC	USA	US DOJ	M	M+F	Baseline: 376; T2: 150*; Endline: 83*	High (RCT)
Davis	2002	HIC	USA	Unspecified	M	M	Baseline: 89; T2: 90; Endline: 89	High (RCT)
Diop	2004	MIC	Senegal	USAID; Population Council	M+F	M+F	Baseline: 2623; Endline: 2397	Serious (QE)
El-Bassel	2005	HIC	USA	NIMH	M+F	M+F	Baseline: 298; Endline: 166	High (RCT)
Erulkar	2011	LIC	Ethiopia	USAID/PEPFAR	M	M	545	Serious (QE)
Exner	2009	MIC	Nigeria	NICHD; NIMH; HIV Center for Clinical and Behavioral Studies	M	M	Baseline: 281; Endline: 185	Moderate (QE)
Fay	2006	HIC	USA	Unspecified	M+F	M+F	Baseline: 154; Endline: 154	High (RCT)
Feder	2000	HIC	USA	US DOJ	M	M+F	Baseline: 321; Endline: 203	High (RCT)
Feder	2002	HIC	USA	US NIJ	M	M+F	Baseline: 520; Endline: 325	High (RCT)
Feder	2004	HIC	USA	US DOJ	M	M+F	Baseline: 520; T2: 325; Endline: 87	High (RCT)
Foshee	1998	HIC	USA	CDC	M+F	M+F	Baseline: 1886; Endline: 1700	High (RCT)
Foshee	2000	HIC	USA	CDC	M+F	M+F	Baseline: 1886; T2: 1700; Endline: 1603	High (RCT)
Foshee	2004	HIC	USA	CDC	M+F	M+F	Baseline: 1886; T2: 1700; T3: 1603; Endline: 460	High (RCT)
Foshee	2005	HIC	USA	CDC	M+F	M+F	1566	High (RCT)
Foubert	1997	HIC	USA	Unspecified	M	M	Baseline: 105; Endline: 77	Serious (QE)

Continued



Table 1 Continued

Author	Year	World Bank category	Country	Funder	Sex		Intervention	Study	Total participants (n=)	Risk of bias (RCT or QE)
					Intervention	Study				
Fuertes	2012	HIC	Spain	Ministry of Science, Technology, Knowledge and Innovation, Chile	M+F	M+F	M+F	Baseline: 169; T2: 169; Endline: 169	Moderate (QE)	
Gidycz	2011	HIC	USA	CDC	M	M	M	Baseline: 635; T2: 529; Endline: 494	Some concerns (RCT)	
Gordon	2003	HIC	USA	Unspecified	M	M	M	248	Serious (QE)	
Gupta	2013	MIC	Côte d'Ivoire	World Bank's SPF; Center for Interdisciplinary Research on AIDS; NIMH	M+F	M+F	M+F	Baseline: 981; Endline: 934	Some concerns (RCT)	
Harrell	1991	HIC	USA	US State Justice Institute	M	M	M	Baseline: 237; Endline: 193	Serious (QE)	
Hillenbrand-Gunn	2010	HIC	USA	Missouri Department of Health and Senior Service; CDC; NCIPC	M+F	M+F	M+F	212	Serious (QE)	
Hossain	2014	MIC	Côte d'Ivoire	Novo Foundation; Sigrid Rausing Trust; UK ESRC	M	M	M+F	Baseline: 578; Endline: 548	High (RCT)	
Instituto Promundo	2012	MIC	Brazil, India, Chile	Instituto Promundo; UNTF	India: M+F; Brazil and Chile: M	Not reported	Brazil	Pretest: 210; Post-test: 180	Serious (QE)	
James	2006	MIC	South Africa	Horizons Project (USAID)	M+F	M+F	M+F	Baseline: 1141; T2: 844; Endline: 768	High (RCT)	
Jewkes	2008	MIC	South Africa	NIMH	M+F	M+F	M+F	Baseline: 2776; T2: 2144; Endline: 2069	High (RCT)	
Kalichman	2009	MIC	South Africa	NIMH	M	M	M	Baseline: 475; T2: 452; T3: 455; Endline: 432	Moderate (QE)	

Continued

Table 1 Continued

Author	Year	World Bank category	Country	Funder	Sex		Total participants (n=)	Risk of bias (RCT or QE)
					Intervention	Study		
Keller	2017	MIC	Kenya	Ujamaa-Africa; No Means No Worldwide	M	M	Baseline: 1543; Endline: 1325	Serious (QE)
Kyegombe	2014	LIC	Uganda	Irish Aid; Sigrid Rausing Trust; 3ie; UKAID; Stephen Lewis Foundation; HIVos; NoVo Foundation	M+F	M+F	Baseline: 1583; Endline: 2532	High (RCT)
Kyegombe	2015	LIC	Uganda	See above	M+F	M+F	Baseline: 1583; Endline: 2530	High (RCT)
Labriola	2005	HIC	USA	US NIJ	M	M	Baseline: 211; Endline: 209	High (RCT)
Lin	2009	HIC	Taiwan	Department of Health (China)	M	M	Baseline: 340; Endline: 301	Serious (QE)
Lundgren	2013	LIC	Nepal	USAID	M+F	M+F	Baseline: 603; Endline: 603	Moderate (QE)
Macgowan	1997	HIC	USA	National Council of Jewish Women	M+F	M+F	Baseline: 740; Endline: 440	Serious (QE)
Maxwell	2004	HIC	USA	NIJ	M	M	367	High (RCT)
Miller	2012	HIC	USA	CDC	M	M	Baseline: 2006; Endline: 1798	Some concerns (RCT)
Miller	2014	MIC	India	Nike Foundation; US NIH; US HRSA	M	M	Baseline: 663; Endline: 309	Moderate (QE)
Pulerwitz	2006	MIC	Brazil	Horizons Program (USAID); REPSSI	M	M	Baseline: 780; T2: 622; Endline: 407	Serious (QE)
Pulerwitz	2010	LIC	Ethiopia	PEPFAR	M	M	Baseline: 729; Endline: 645	Moderate (QE)
Pulerwitz	2015	LIC	Ethiopia	PEPFAR	M	M	Baseline: 729; Endline: 645	Moderate (QE)
Rhodes	2011	HIC	USA	NIMH	M	M	Baseline: 142; Endline: 139	Some concerns (RCT)
Salazar	2006	HIC	USA	Georgia State University	M	M	Baseline: 47; Endline: 36	High (RCT)

Continued

Table 1 Continued

Author	Year	World Bank category	Country	Funder	Sex		Study	Total participants (n=)	Risk of bias (RCT or QE)
					Intervention	Control			
Salazar	2014	HIC	USA	NCIPC; CDC	M	M	M	Baseline: 743; T2: 451; Endline: 215	Some concerns (RCT)
Saunders	1996	HIC	USA	CDC; University of Michigan	M	M	M+F	Baseline: 417; Follow-up: 243	High (RCT)
Schuler	2012	LIC	Tanzania	C-Change Project & international partners (USAID)	M+F	M+F	M+F	Baseline: 764; Endline: 369	High (RCT)
Schuler	2012	MIC	Guatemala	C-Change Project & international partners (USAID)	M+F	M+F	M+F	Baseline: 1122; Endline: 603	High (RCT)
Schwarz	2004	HIC	USA	Unspecified	M+F	M+F	M+F	Baseline: 65; Endline: 58	Moderate (QE)
Shattuck	2011	LIC	Malawi	Family Health International; USAID	M	M	M	Baseline: 397; Endline: 289	Some concerns (RCT)
Taylor	2012	MIC	South Africa	SANPAD	M+F	M+F	M+F	Baseline: 816; Endline: 679	High (RCT)
Taylor	2001	HIC	USA	US NIJ	M	M	M	Baseline: 376; T2: 171, Endline: 186	High (RCT)
Taylor	2009	HIC	USA	US NIJ	M	M	M	629	High (RCT)
Verma	2008	MIC	India	PEPFAR	M+F	M+F	M	Baseline: 1915; Endline: 1138	Moderate (QE)
Wagman	2015	LIC	Uganda	Bill & Melinda Gates Foundation; US NIH; WHO; PEPFAR; Fogarty International Center	M+F	M+F	M+F	Baseline: 11 448; T2: 7842; Endline: 6526	High (RCT)
Weisz	2001	HIC	USA	Michigan Community Health Department	M+F	M+F	M+F	Baseline: 66; T2 & endline: <i>varied by measure</i> : Knowledge=26 Attitudes=29 Perpetration=23 Victimization=20	Moderate (QE)
Wolfe	2003	HIC	Canada	Ontario Mental Health Foundation; NHRDP (Health Canada); SSHRC (Canada)	M+F	M+F	M+F	Baseline: 191; Endline: 158	Moderate (QE)

*Values imputed from percentages reported by study authors.

F, female; HIC, high-income country; LIC, low-income country; M, male; MIC, middle-income country; QE, quasi-experimental study; RCT, randomised controlled trial.

Table 2 Programme characteristics by programming approach

Programme characteristics	Programme approach							Total	
	CMEP	CEP	SEP	UEP	SPOP	CHOP	CHP		CBP
Gender-transformative characteristics									
Transform harmful gender norms/practices at individual/group level	17	9	15	5	3	4	3	12	68
Transform unequal gender relations through more structural dimension	12	0	4	0	0	1	0	0	17
Programme behaviour-change components									
Education	17	8	15	5	1	4	3	12	65
Persuasion	16	7	12	4	3	4	3	8	57
Incentivisation	3	0	1	0	1	0	2	0	7
Coercion	0	0	0	0	0	0	0	7	7
Training	13	8	14	2	3	4	2	9	55
Restriction	0	0	0	0	0	0	0	0	0
Environmental restructuring	5	0	3	1	1	2	0	4	16
Modelling	10	5	8	4	3	4	2	1	37
Enablement (beyond education and beyond environmental restructuring)	13	5	6	0	1	1	3	5	34
Policy components									
Community marketing	5	0	0	0	0	0	0	0	5
Target level									
Individual	0	0	1	1	1	2	2	3	10
Couple	3	0	0	0	0	1	1	0	5
Group	12	13	16	4	4	6	2	12	59
Community	12	0	4	0	0	1	0	0	17
Delivered by									
Professional	9	3	11	0	0	0	1	5	29
Facilitator	8	3	5	2	2	1	1	4	26
Mentor	3	0	0	0	2	1	1	0	7
Peer	8	4	0	3	2	2	0	1	20
Received by									
Males only	5	4	1	4	3	1	2	12	32
Males and females	13	5	14	1	0	3	1	0	37
Delivery setting									
Home	3	0	1	0	0	2	0	0	6
Community	17	8	4	0	1	4	1	11	46
Healthcare	4	0	0	0	0	2	2	1	9
Educational	2	1	15	5	3	1	0	0	27
Dosage									
<3 months	3	4	11	5	2	0	2	5	32
3–6 months	6	4	2	0	0	1	1	4	18
6–12 months	3	0	1	0	1	2	0	3	10
>12 months	6	1	1	0	0	1	0	0	9

CBP, Court-mandated Batterers Programme; CEP, Community Education Programme; CHOP, Community Health Outreach Programme; CHP, Community Health Centre health/parenting Promotion Programme; CMEP, Community Mobilisation and Education Programme; SEP, School or after-school based Educational Programme; SPOP, Sports-based educational Outreach Programme; UEP, College/University based Educational Programme.

components.⁷ Viewed through this model, only five interventions sought to make changes at the *policy level* and that too was limited to one strategy, that of large-scale social media and print communication campaigns designed to reach a larger population. Untested in the included studies were other policy level programming characteristics of the BCW such as guidelines, social planning, legislation, service provision, regulation and fiscal measures. Examples of programming mechanisms are presented in [table 3](#).

Key finding 3: A majority of studies showed either positive or mixed efficacy in relation to behavioural and attitudinal outcomes

A majority of the studies (61/68) showed some evidence of efficacy in relation to behavioural and attitudinal outcomes. Specifically, 38/61 showed positive effect on study outcomes and 23/61 showed mixed effects (ie, showed positive effects on some outcomes, but nil effect on others). No study found a negative effect of intervention on any of the outcomes of interest (online supplemental file 6).

Seven programmes were replicated, some with adaptation to context, and evaluated more than once ([table 4](#)). Based on this smaller group of interventions studied through experimental designs more than once, only the *Duluth Model* demonstrated no evidence of effect in either behavioural or attitudinal SRHR outcomes. The *Duluth Model* programme targeted individual men perpetrating violence towards their intimate partners and was delivered in a custodial setting as a court-mandated programme for convicted offenders. Literature on working with men on violence against women prevention has shown that it is more challenging to work with convicted offenders of domestic violence because many of them have multiple and long histories of trauma and problem behaviours including involvement in other crimes, alcohol misuse, substance use or mental health conditions.¹³

Only three of the seven studies evaluated biological outcomes. In the case of *Program H* and *Male Norms Initiative*, biological outcomes were assessed through self-reported sexually transmitted infection (STI) symptoms, which reduces confidence in demonstrating efficacy. The *Stepping Stones* RCT, the only study in this analysis to use biomarkers, showed the intervention reduced rates of herpes simplex virus 2 among men but did not show a reduction on the primary outcome of HIV.

Key finding 4: Programme characteristics consistently employed across effective interventions evaluated more than once were: multicomponent activities; multilevel programming; working with both women and men and trained facilitation of interventions of at least three-month duration

Programme characteristics consistently employed across effective interventions evaluated more than once were: first, *multicomponent activities* and specifically: *education, persuasion, modelling and enablement*. These programming

mechanisms span the three elements of the COM-B model for effective behaviour change interventions: *capability, motivation and opportunity*.⁷ Second, there was most evidence for Community Mobilisation and Education Programmes that included multilevel programming which sought to *address gender inequality from a more structural dimension* through implementing changes that impact the social norms, physical or regulatory environments in communities, institutions or at the policy level. However, just as when *all* included studies are examined, only a limited range of policy or structural level programming mechanisms has been tested within this subset of effective programmes evaluated more than once. To date, based on programme descriptions in studies, only the application of ‘wider community and mass media campaigns’ has been tested.

Successful programmes also tended to be delivered to both women and men either in separate or mixed sex groupings. Further delivery characteristics associated with positive effects were programmes implemented in community settings and delivered by professionals or trained facilitators, including peer mentors and a programme duration of longer than three months (three months was identified as the modal dosage intervention time across all interventions). Programmes implemented effectively in a different country first underwent significant cultural adaptation prior to evaluation in the new context.

Key finding 5: All included studies had moderate to high risk of bias and hence, the quality of evidence needs to be improved

All 32 quasi-experimental studies were assessed to have *serious/moderate risk of bias* (serious n=14; moderate n=18) and all 36 RCTs were *assessed to have high risk of bias* (n=28) or some concerns (n=8). The risk of bias among studies was typically related to participant selection, randomisation, deviations from the intended intervention, missing data and overall reporting standards (online supplemental file 7).

In many cases, however, the resultant risk of bias was due to large-scale challenges encountered in the implementation environment during intervention or study enactment. For example, the implementation of two interventions, *SASA!* in Uganda and *Regai dzive Shiri* in Zimbabwe was adversely affected by political and economic unrest in the study locations, causing significant population out-migration.^{14 15} Hence, there were challenges with programme implementation as well as participant follow-up and modifications had to be made, for example, intervention delivery in communities rather than schools.¹³ Hence, despite the high risk of bias identified across studies as a whole in this review, potentially promising conclusions from implementing well-planned interventions in complex environments should not be ignored.¹⁶

Table 3 Definition and examples of Gender-transformative programming mechanisms

Behaviour change mechanisms	Behaviour change wheel definition	Gender-transformative examples in intervention studies
Education	Increasing knowledge or understanding	Information on concepts of sexual freedom, coercion and consent, possible consequences, different contexts, situations and interactions.
Persuasion	Using communication to induce positive or negative feelings or stimulate action	Gender Dialogue Groups for women and male partner (or male family member) brought together to reflect on financial decisions and goals and sought to address household gender inequities; underscoring all sessions were messages on importance of non-violence in the home, respect and communication between men and women and value of women in the household.
Incentivisation	Creating expectation of reward	Sports, particularly weekly football matches, used as venue for dialogue and opportunity to convey gender equality workshop themes.
Coercion	Creating expectation of punishment or cost	Court-ordered requirements for attendance/participation, limitations on confidentiality, protocol around partner safety. Mandatory fee-paying.
Training	Imparting skills	Interactive teaching, small group discussion, scripting behaviour through vignettes and role plays, proverbs, songs, stories and games—to engage and facilitate skills development challenging gender-based violence (eg, norms that challenge legally permissible wife beating). Emphasised communication, assertiveness and negotiation skills requisite for practicing safer sex.
Restriction	Using rules to reduce the opportunity to engage in the target behaviour	Not available (N/A). Suggested potential example: curfew to prevent underage drinking associated with unintended teenage pregnancy.
Environmental restructuring	Changing the physical or social context	Community activities to enhance availability of dating violence services from which adolescents can seek help.
Modelling	Providing an example for people to aspire to or imitate	Programme peers or leaders, eg, sports coaches, challenging harmful normative attitudes and behaviours within community such as acceptability of violence against women and encourage positive male behaviours, such as positive parenting, that participants could identify with and emulate in their own lives. Public declaration of community leaders from within communities for abandonment of Female genital cutting.
Enablement	Increasing means/reducing barriers to increase capability or opportunity	Postintervention 'check-in' sessions with programme facilitators to review and support personal risk reduction goals in prevention of sexual/dating violence.
Policies		
Communication/marketing	Using print, electronic, telephonic or broadcast media to convey messages to large population groups	Social marketing campaign targeted to about 3000 young people called 'Budi muško' or 'Be a man'. The overall theme of campaign was to challenge rigid norms of masculinity.
Guidelines	Creating documents that recommend or mandate practice. This includes all changes to service provision	N/A. Suggested potential example: national-level support for inclusion of men in antenatal care and women's health needs in preparation for the birth of an infant.
Fiscal	Using the tax system to reduce or increase the financial cost	N/A. Suggested potential example: tax incentives for businesses offering paternity leave.

Continued

Table 3 Continued

Behaviour change mechanisms	Behaviour change wheel definition	Gender-transformative examples in intervention studies
Regulation	Establishing rules or principles of behaviour or practice	N/A. Suggested potential example: national move to mandatory relationship and sexuality education in secondary schools.
Legislation	Making or changing laws	N/A. Suggested potential example: national government level legal prohibition of child marriage.
Environmental/social planning	Designing and/or controlling the physical or social environment	N/A. Suggested potential example: federal government level provision of sufficient abortion clinics in every state to ensure nationwide access.
Service provision	Delivering a service	N/A. Suggested potential example: government level initiative to deliver community youth-friendly sexual and reproductive health services.

Key finding 6: There are significant gaps in the evidence with respect to SRHR in disease outbreaks and facilitating women's access to safe abortion

There were no gender-transformative male engagement programmes that addressed prevention of unsafe abortion, and sexual and reproductive health in disease outbreaks (eg, Zika and Ebola). As shown in figure 3, the majority of studies addressed the *prevention of violence against women and girls* (n=51). The next most frequently intervened SRHR domains were *promotion of sexual health and well-being* (n=16), *healthy adolescence* (n=16), *helping people realise their desired family size* (n=10) and *ensuring the health of pregnant women* (n=3). Over half of the intervention studies (n=38) focused on a single SRHR topic or domain. The remaining intervention studies addressed multiple SRHR domains concurrently.

There were also gaps in gender-transformative male engagement programmes on important areas *within* SRHR domains. Within the desired family size domain, no interventions were identified to address infertility, nor were there interventions to enhance desired family size in lesbian, gay, bisexual, transgender and queer or questioning (LGBTQ) relationships. Within the domain of health of pregnant women, while all three studies included involving men in preparedness for birth, only one addressed male involvement in supporting women to breast feed. In the promoting sexual health and well-being domain, the predominant focus was on preventing and treating STIs, including HIV. While some studies (n=3) focused on wider sexual health and well-being through factors such as communication and shared decision-making, none addressed sexual dysfunction. In the healthy adolescence domain, the focus was predominantly on preventing intimate partner violence (IPV), and few addressed preventing adolescent pregnancy (n=1), STIs (n=3) or improving sexual decision-making (n=1). Finally, within the preventing violence against women and girls domain, the focus was on IPV, with fewer studies

addressing harmful practices such as female genital mutilation (n=2); child, early and forced marriage (n=2) or IPV on males (n=3) (online supplemental table 8).

DISCUSSION

While other studies have addressed specific SRHR topics such as preventing violence against women or HIV^{17 18} or specifically focused on adolescents,^{19 20} this is the first systematic review of the evaluation evidence on what has been done programmatically to engage boys and men in gender-transformative programming across *all* WHO SRHR outcomes. This is important because there is now greater evidence for implementing multitargeted programmes, rather than single issue programmes.²¹

The review identifies specific positive programming mechanisms of gender-transformative interventions to guide others working on male engagement programmes. Given the increasing policy, donor and programmatic investments in engaging men and boys in gender-transformative approaches, it is vital that these are driven by a methodologically robust understanding and framework of gender-transformative programming and with the same evaluation rigour that is applied to other public health programming and policy making.

The synthesis offers the following appraisal of the available evidence and gaps. First, since the first literature review conducted in this field in 2007²² and up to July 2018, we identified only 68 experimental evaluations engaging men and boys in gender-transformative interventions. The vast majority of these relates to preventing violence against women and girls (75% percent) and only seven interventions have been evaluated more than once.

Second, analysis of programming characteristics highlights that the most common type of gender-transformative programmatic intervention approach was Community Mobilisation and Education Programmes. Promising programming mechanisms of gender-transformative

Table 4 Efficacy of named interventions evaluated more than once

Intervention	Number RCTs	Number QE	Intervention studies	Risk of bias	Countries	WB country income	SRHR domain 1-7†	Outcome level/conclusions (+: positive effect; -: nil effect, --: some positive/nil effects)			Overall			
								Behavioural	Attitudinal	Biological				
C-Change	2	0	152 Schuler (2012)*	High	Tanzania	LIC	1	-	+	+	+-			
			153 Schuler (2012)*	High	Guatemala	MIC	1	-	+	+	+	+-		
Coaching Boys into Men	1	1	121 Miller (2012)	Some concerns	USA	HIC	6	+-	+-	+-	+-			
			122 Miller (2014)*	Moderate	India	MIC	7	+-	+-	+-	+-			
			35 Das (2012)*	Serious	India	MIC	7	+-	+	+	+	+-		
Duluth Model	6	2	56 Feder (2000)	High	USA	HIC	7	-	-	-	-			
			57 Feder (2002)	High					-	-	-			
			58 Feder (2004)	High					-	-	-			
			110 Labriola (2005)	High	USA	HIC	7	-	-	-	-			
			36 Davis (2000)*	High	USA	HIC	7	+-	+-	+-	+-			
			164 Taylor (2009)*	High	USA	HIC	7	+-	+-	+-	+-			
			119 Maxwell (2004)*	High	USA	HIC	7	+	+	+	+			
			163 Taylor (2001)*	High	USA	HIC	7	+-	+-	+-	+-			
			75 Harrel (1991)*	Serious	USA	HIC	7	-	-	-	-			
			112 Lin (2009)*	Serious	Nepal	LIC	7	+-	+-	+-	+-			
			141 Pulerwitz (2006)	Serious	Brazil	MIC	4 to 7	+	+	+	+	+		
			142 Pulerwitz (2010)	Moderate	USA	HIC	4 to 7	+	+	+	+	+		
			Program H	0	4	141 Pulerwitz (2006)*	Serious	Brazil	MIC	3	+	+	+	+
						142 Pulerwitz (2010)*	Serious	Ethiopia	LIC	4 to 7	+	+	+	+
169 Verma (2008)*	Moderate	India				MIC	3	+	+	+	+			
Safe Dates	2	0	85 Instituto Promundo (2012)*	Serious	Brazil, India, Chile	MIC, HIC	7	+	+	+	+-			
			Foshee (1998)	High	USA	HIC	6	+	+	+	+-			
			Foshee (2000)	High					-	+-	+-			
			63 Foshee (2005)	High					+	+	+			
			62 Foshee (2004)*	High	USA	HIC	6	-	-	-	-			

Continued

Table 4 Continued

Intervention	Number RCTs	Number QE	Intervention studies	Risk of bias	Countries	WB country income	SRHR domain 1-7†	Outcome level/conclusions (+: positive effect; -: nil effect, --: some positive/nil effects)		
								Behavioural	Attitudinal	Biological
Stepping Stones	3	1	91 Jewkes (2008) 85 Instituto Promundo (2012)*	High Serious	South Africa Brazil, India, Chile	MIC MIC, HIC	4 to 7 7	+-- +	+--	+--
			152 Schuler (2012)* 153 Schuler (2012)*	High High	Tanzania Guatemala	LIC MIC	1 1	- -	+	+

*Study/Paper examines adaptation or element of intervention.

†WHO SRHR domains: (1) helping people realise their desired family size; (2) ensuring the health of pregnant women/girls and their new-born infants; (3) preventing unsafe abortion; (4) promoting sexual health and well-being; (5) promoting sexual and reproductive health in disease outbreaks; (6) promoting healthy adolescence for a healthy future; (7) preventing and responding to violence against women/girls.

HIC, high-income country; LIC, low-income country; QE, quasi-experimental study; RCT, randomised controlled trial; SRHR, sexual and reproductive health and rights; WB, World Bank.

interventions (based on an analysis of effective interventions evaluated more than once) include: (I) multi-component activities of *education, persuasion, modelling* and *enablement* approaches that cover all elements of the COM-B model for successful behaviour change interventions: *capability, motivation* and *opportunity*; (II) multilevel programming that reaches beyond the individual or groups and mobilises the wider community to adopt egalitarian gender norms and practices (ie, includes gender-transformative component at the structural level); (III) working with both women and men either in mixed sex groups or separately and (IV) delivery of activities by trained facilitators and for a sufficient duration of time to allow for diffusion and sustaining of change to occur.

Third, there is evidence of efficacy in relation to gender attitudes and some SRHR behavioural outcomes, but not primary biological outcomes when assessed through biomarker measurement. The evidence on attitudes and behaviours should be regarded as promising rather than firm, given the observed significant risk of bias in the available evidence. Consistent with guidelines for evaluating the evidence of complex interventions, these promising conclusions should appropriately inform the evolution of more robust studies, including studies that clearly distinguish *a priori* primary and secondary outcomes.

Finally, a number of gaps in evidence have been identified most notably in areas of gender-transformative programming with men to support women's access to safe abortion, SRHR during disease outbreaks, addressing infertility, men's engagement in supporting women during the postpartum period and in relation to breast feeding, sexual well-being and adolescent pregnancy. To advance the field, a particular contribution would be greater cooperation between researchers and programmers in designing dynamic logic modelling of interventions over time and tracing descriptions of programming, for example, by using the Template for Intervention Description and Replication guidelines.²³ This would inform richer and more rigorous evaluations of what programme mechanisms are impactful and why and for whom. The review also highlights the limitations of gender-transformative programming mechanisms that are limited to bringing behaviour change through targeting individuals or small groups. It highlights the need to build on these programmes to include gender-transformative programming mechanisms at the structural level—that is either at the community, institutional or societal level. Very few interventions in this review went beyond the small group and community level to include larger structural change, which literature in the field of gender-transformative programming overall shows is critical to bringing change in gender norms and power relations at scale and to sustain this change.^{19 24-28} Furthermore, our review highlights that the evaluation science on male engagement in gender-transformative interventions is heavily weighted towards heteronormative over LGBTQ relationships. Our recommendation for future research is to consider programming with males

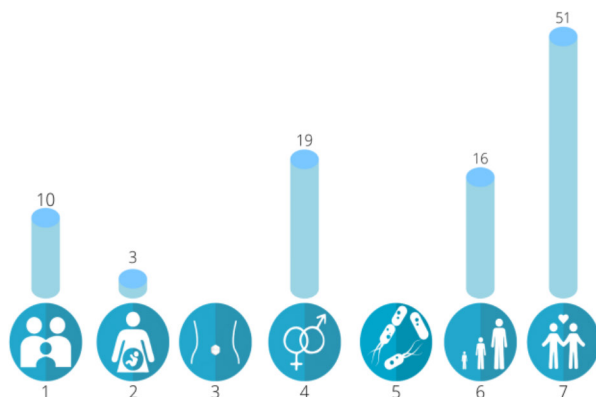


Figure 3 WHO sexual and reproductive health and rights (SRHR) domains addressed by interventions in review.

1. Helping people realise their desired family size (contraception and family planning; prevention and treatment of infertility)
2. Ensuring the health of pregnant women/girls and their new-born infants (maternal and infant mortality; preventing complications in pregnancy, childbirth, and postnatal period)
3. Preventing unsafe abortion
4. Promoting sexual health and well-being (prevention of reproductive tract and sexually transmitted infections; HIV/AIDS; interventions promoting sexual well-being e.g. treatments for erectile dysfunction. Excluding conditions not acquired sexually e.g. testicular and prostate cancers, and more general men's health conditions)
5. Promoting SRH in disease outbreaks (prevention of sexual transmission of Zika and Ebola viruses)
6. Promoting healthy adolescence for a healthy future (covering all SRHR outcomes with a specific focus on adolescents)
7. Preventing and responding to violence against women/girls (intimate partner violence (IPV); domestic violence, sexual coercion/violence) and harmful practices (i.e. female genital mutilation; child, early, and forced marriage, IPV in males).

that also addresses homophobic aspects of masculinity and promotes SRHR for LGBTQ communities, either by using or expanding the WHO SRHR outcome domains.

Conclusions drawn from the evidence should be considered in light of review limitations. As data were derived from a first stage systematic review of reviews, evidence that was not included in existing systematic reviews and those in systematic reviews published after July 2018 have not been included. The published extensive search strategy³ conducted without language restrictions included nine data bases and supplementary internet searches to cover both scientific and grey literature, including Global Health Library, but did not include foreign-language databases. The focus on experimental and quasi-experimental studies and exclusion of cross-sectional and solely qualitative studies, while providing a more robust pool of data, can overlook important other information. Qualitative research in particular would yield important insights into users' experiences of gender-transformative programming. The inclusion of qualitative evaluations alongside experimental designs in systematic reviews is likely more feasible in systematic reviews that are not covering the whole spectrum of SRHR outcomes and the authors intend to join others in taking up this challenge in further systematic reviews. Meta-analysis of all included studies was not possible owing to heterogeneity in outcomes, outcome measures and research designs.

CONCLUSION

This review shows that gender-transformative interventions engaging men and boys in SRHR are promising and warrant further rigorous development in terms of conceptualisation, design and evaluation. In particular, this review draws out the primary programming mechanisms or 'active ingredients' at play in successfully engaging men in challenging gender inequalities, male privilege and harmful or restrictive masculinities to improve SRHR for all. In addition, the review identifies a range of underused but promising programming mechanisms targeting a more structural or policy level within gender-transformative programming. Critical

gaps identified by the review in gender-transformative SRHR programming with men and boys relate to whole WHO SRHR domains as well as subdomains. The identification of these gaps can inform future programming and research in this field. The findings of this review are also contributing to developing a priority research agenda for engaging men and boys in SRHR programming that is ongoing by WHO's Human Reproduction Programming. The central question going forward is not whether or not to engage men and boys in SRHR, but how to do so in ways that do no harm, promote gender equality and health for all and are scientifically rigorous.

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