

What works to prevent violence against women and girls?

Evidence Review of Approaches to Scale up VAWG Programming and Assess Intervention Cost-effectiveness and Value for Money

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Michelle Remme
Christine Michaels-Igbokwe
Charlotte Watts

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1. Introduction

Violence against women and girls (VAWG) is both an unacceptable human rights violation and a serious social, economic and health concern. According to a recent global study, 35% of women worldwide have experienced either physical and/or sexual intimate partner violence or non-partner sexual violence [1-2]. There is an urgent need to scale up efforts across sectors to effectively prevent these forms of violence.

The Medical Research Council of South Africa (MRC) is leading a consortium consisting of the London School of Hygiene and Tropical Medicine, Social Development Direct and James Lang to administer Component 1 of DFID's flagship Violence Against Women and Girls (VAWG) Research and Innovation Fund (RIF)¹. The aim of the fund is to build knowledge on strategies and interventions that prevent VAWG and strengthen women's and girls' agencies and empowerment to protect them from violence, including the effectiveness of specific response mechanisms to prevent VAWG.

As part of this component, grants will be made to fund innovative approaches to preventing violence or meeting the needs of victims and research will be undertaken to evaluate promising interventions, assess their effectiveness, or if proven effective, to better understand the economics of scale up. The consortium has established five working groups, of which Working Group 5 will focus on generating evidence to inform options for scaling up effective programmes, including social norm change, and to identify how the research programme can generate strong evidence on which intervention approaches may offer best value for money.

This review falls under this programme of work and has a two-fold **purpose**:

1. To inform the thematic focus and priorities of the RIF over the next five years.
2. To establish a baseline of the state of knowledge and evidence against which to assess the achievements of the RIF over the next five years.

The **specific objectives** of the evidence review are to:

- Summarise some examples of entry platforms through which VAWG programmes are being implemented
- Start to identify current VAWG prevention interventions that have been replicated in more than one setting
- Synthesise current evidence on the costs of VAWG prevention (focusing on good quality costing studies, rather than financial cost assessments alone)
- Drawing upon the broader literature of intervention scale up, discuss how to conceptualise the replication and scale up of violence prevention programming, and potential approaches to considering how to value the cost-effectiveness of VAWG prevention programmes, and the implications for future evaluation research.

¹ There are three separate components of the fund:

- Component 1: Prevention of VAWG (in stable and fragile contexts)
- Component 2: VAWG in conflict and humanitarian emergencies
- Component 3: Economic and social costs of VAWG
- Evaluation

The MRC led consortium is responsible for Component 1 and the overall management of the Fund

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- Identify potential opportunities to conduct future economic evaluations of ‘scaled-up’ VAWG prevention components, to enable lessons to be learned about the sources of variation on unit cost estimates, and to produce evidence of the impact of scale on programme costs.

2. Methodology

Scale up is primarily used to describe the ambition or process of expanding the coverage of interventions, but can also refer to increasing the financial, human and capital resources required to expand coverage [3]. The World Bank defines scaling up as “expanding, adapting and sustaining successful policies, programmes or projects in different places and over time to reach a greater number of people” [4].

Scaling up successful VAWG prevention interventions will require making the economic case for such investments and ensuring that sufficient resources are allocated to implement large-scale programmes. In order to explore options for scaling up VAWG prevention programmes, we undertook this review based on the following steps and as illustrated in Figure 1:

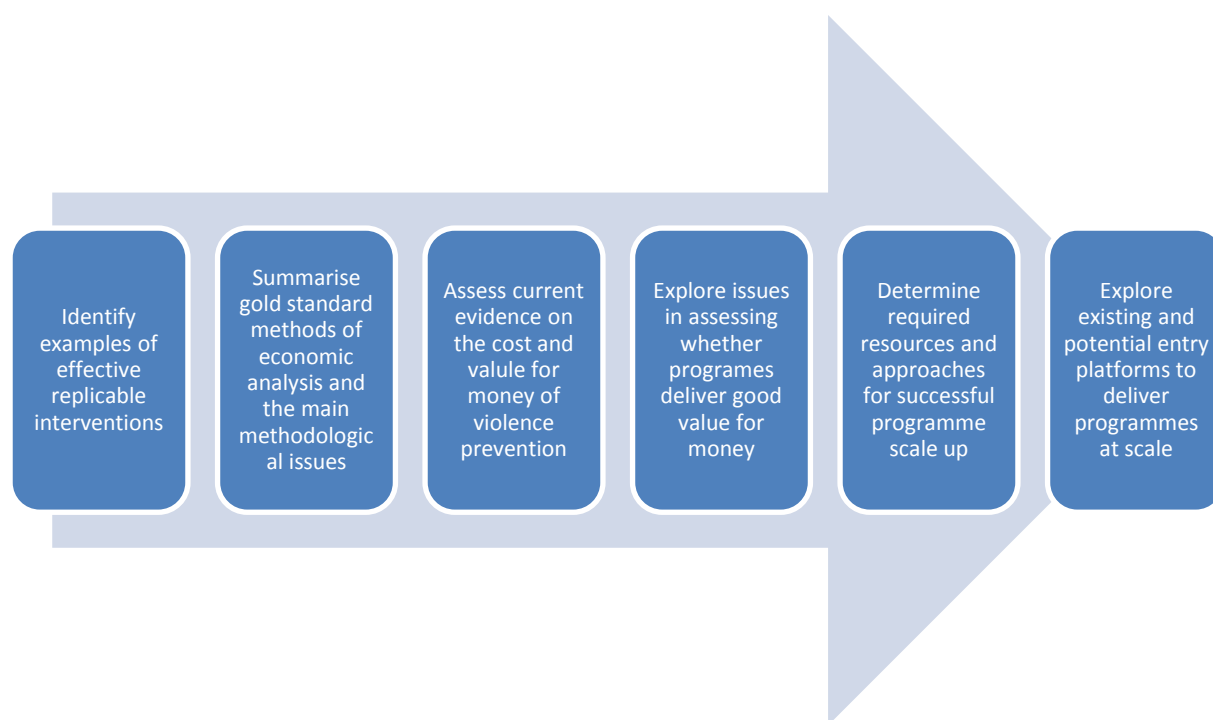
1. **Identify examples of replicable interventions that have demonstrated to be effective at preventing VAWG in multiple settings:** while other working groups are reviewing the evidence on what works to prevent VAWG, our review focused on identifying the specific interventions or programme models that have been effectively replicated in more than one setting or country. The focus on replicated models stems from the understanding that it is only worth scaling up interventions that can be adapted and replicated effectively [4]. An intervention that addresses a localised problem of contained scale or in a very locally-specific manner may not be scalable.
2. **Summarise gold standard methods of economic analysis:** we synthesised the identified and potential issues encountered when collecting and analysing intervention costs and discussed the main methodological issues in assessing them.
3. **Assess current evidence on the costs and value for money of VAWG prevention:** we reviewed the evidence on the economic costs of implementing these replicable interventions aimed at preventing VAWG, as well as evidence on their value for money by searching for economic evaluation studies.
4. **Explore issues in assessing whether programmes deliver good value for money:** we discuss how to conceptualise value for money of VAWG prevention programmes that tend to have multiple outcomes and tackle overlaying vulnerabilities, and explore potential approaches to consider in future economic evaluation.
5. **Determine what resources would be needed and approaches adopted to enable programme scale up and to what extent potential economies of scale or scope could be achieved:** in order to increase scale or service coverage, there would need to be additional financial, human and physical inputs to produce the required interventions, either through increased financial investments in service inputs and/or

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more efficient use of currently underutilised inputs (excess capacity). Further analysis of the composition of programme costs provides a starting point, but we also discuss further implications and conceptual approaches to scale up.

6. **Identify some of the current and potential entry platforms that have been/could be leveraged to implement VAWG prevention programme components at scale** in various settings. Based on previous reviews, we summarise the platforms across sectors upon which VAWG prevention activities can be taken to scale, and discuss other potentially important opportunities, that may merit exploration.

Figure 1. Study steps to assess scale up options for VAWG prevention programmes



In order to identify VAWG prevention interventions that have demonstrated impact and been replicated, we relied predominantly on recent evidence reviews and expert consultation through the consortium's other working groups. We conducted additional literature reviews to identify studies on the costs and value for money of VAWG interventions, as well as on approaches to programme scale up in the health and development sector, to further inform the conceptualisation of VAWG programme replication and scale up (see Table 1). We searched for peer-reviewed publications as well as grey literature. Although we considered studies from high-income countries, we focused our assessment of the cost and value for money evidence on low and middle-income countries, which are the focus of the VAWG RIF. All costs were adjusted to 2012 USD, using the United States' GDP deflator.

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Table 1. Search questions, terms and databases

Question	Search terms	Databases
What are the costs of VAWG interventions?	Cost, violence, partner violence, domestic violence, women, gender, masculinity, program(me), intervention	Pubmed, Econlit, Eldis, GoogleScholar
Are VAWG prevention interventions good value for money (cost-effective)?	Economic evaluation, cost-effectiveness, cost-utility, cost-benefit, violence, partner violence, domestic violence, women, gender	Pubmed, Econlit, Eldis, GoogleScholar
What factors need to be considered when planning for VAWG programme scale up?	Scaling up, scale up, program(me), intervention, enabling, constraints, costs, resources, challenges	Pubmed, GoogleScholar, World Bank, UNDP, UN Women websites

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3. Synthesis and assessment of the evidence base

3.1 Effective and replicable models

Effective prevention interventions may interrupt or mitigate various potential pathways to VAWG, from more proximal to more distal causes across the ecological framework [5]. Below we describe some of the models of intervention identified in our review that have been replicated in more than one setting. These are grouped in terms of their different modes of delivery, as different approaches will have different cost implications and potential scale-up paths (see Figure 2).

Individual level economic empowerment of women and their households

Interventions have been implemented that target individual women and men or their households to address the drivers of violence. One example that is increasingly emerging as relevant is cash transfer schemes, both conditional and unconditional. These have broader development objectives and no specific VAWG prevention component, but have been found to indirectly affect partner violence.

- **Conditional and unconditional cash transfers** (Mexico, Kenya, Ecuador)

Social cash transfers, both conditional and unconditional, have been gaining momentum in Latin America and sub-Saharan Africa, as important poverty reduction interventions with multiple health, education and economic benefits. Some evidence also points to their potential to empower women and shift intra-household power dynamics. There is in general mixed evidence of how women's access to cash or higher incomes influence partner violence [6], and despite the many schemes being piloted and/or implemented at scale for over a decade, few have been evaluated from a violence prevention angle [7]. Where this has been done, however, receipt of a cash transfer has been found to reduce physical partner violence by between 30-50% in Mexico's well-established Oportunidades programme [8-9], Kenya's pilot Give Directly unconditional cash transfer [7] and a cash transfer scheme piloted by WFP in Ecuador [10].

Gender-transformative group education sessions with women and/or men

A common model of intervention delivery are *individual or group level interventions*, with women and/or men, that seek to change social norms and behaviour through small group participatory workshops that challenge existing beliefs, build pro-social skills, promote reflection and debate, and encourage collective action. Such models of intervention that have been replicated in more than one setting include:

- **Stepping Stones** - a participatory small group intervention targeting both women and men of different ages and designed to build knowledge, risk awareness and communication skills around gender, HIV, violence and relationships. It involves at least 50 hours of intervention over 10 to 12 weeks, delivered in 15 sessions. Sessions are typically delivered to four sex and age-segregated groups that come together from time to time for full community dialogues. In some instances Stepping Stones also includes community mobilisation/engagement activities. A randomised

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controlled trial of this intervention in South Africa showed significant reductions in the levels of intimate partner violence (IPV) perpetration reported by men but not on women's experience of IPV [11]. The model has been replicated in over 40 countries since the mid-nineties [6].

- **Programme H** - a community education intervention developed in Brazil to promote gender equitable attitudes and action among young men. Trained pro-social mentors facilitate small group sessions using a participatory curriculum during regular (often weekly) sessions over four to six months. The approach has evolved from focusing on workshops and community mobilisation to a multipronged strategy combining participatory training with advocacy and lifestyle social marketing aimed at changing community norms. It was found to lead to significant positive changes in gender attitudes, partner communication, and partner violence. It has been replicated in India (*Yaari-Dosti*), Tanzania, Croatia, Vietnam and countries in Central America [6, 12].
- Similar approaches also include the **Men as Partners** intervention developed by the NGO Engenderhealth and implemented in South Africa and other settings [13]. The Ethiopia **Male norms initiative** adapted the latter model and Programme H, implementing a group education component and a broader package of community engagement activities (including community workshops, music, skits, monthly newsletter and leaflets, and condom distribution). Community engagement alone and in combination with group education impacted significantly on young men's gender equitable norms and on levels of reported violence [6].

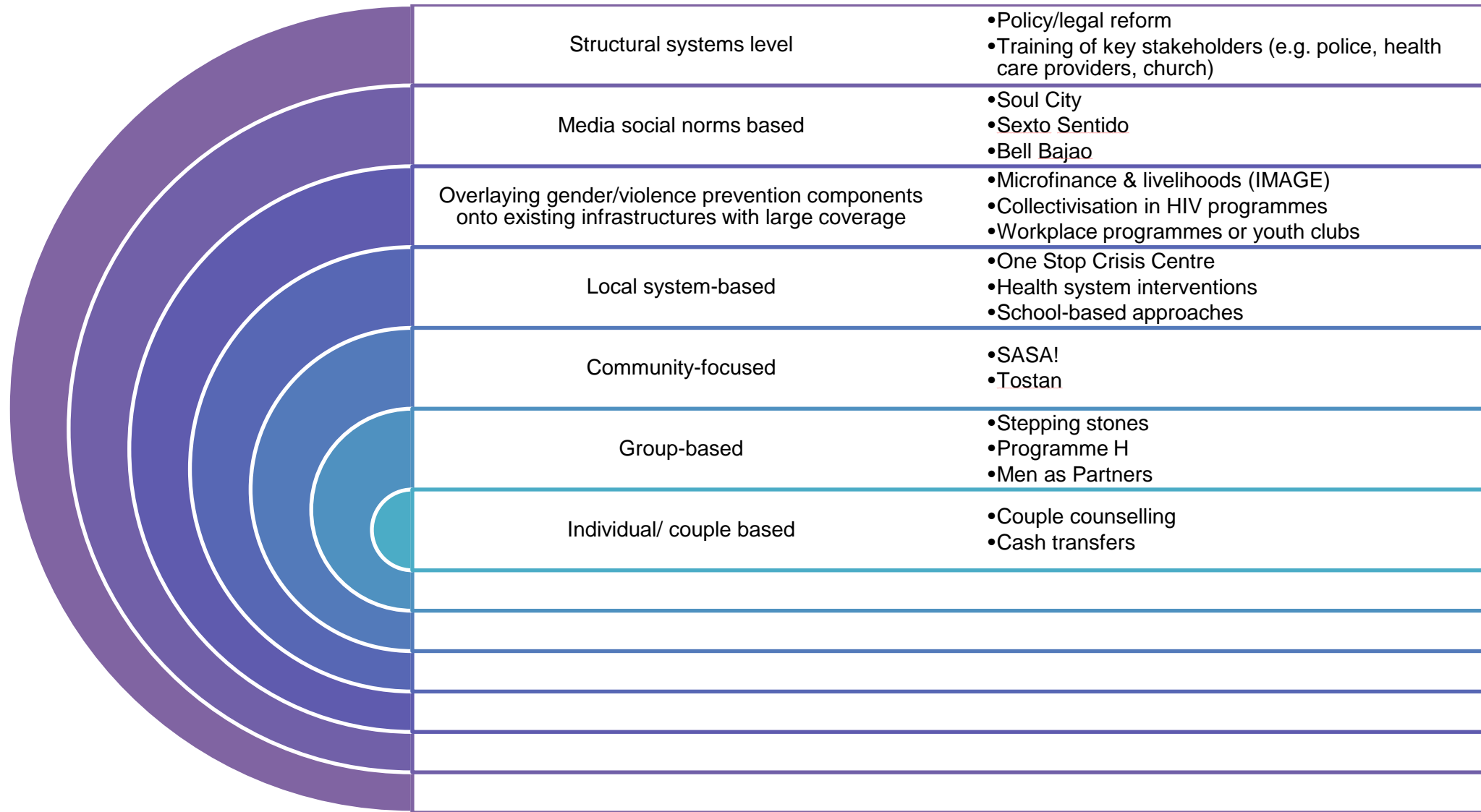
Community-focused interventions

Approaches to transform norms at the community level include a community mobilisation intervention aimed at transforming norms around violence and HIV, as described below:

- **SASA!** - a community mobilisation intervention in Kampala, Uganda aimed at preventing violence against women through changing the "community attitudes, norms and behaviours that underlie power imbalances between men and women and support both HIV risk behaviours and the perpetration of violence against women" [14-15] The intervention is designed to take communities through four stages of change beginning with identifying linkages between violence and HIV risk, followed by raising awareness, supporting men and women affected by violence to change and taking action to prevent violence. Intervention activities are conducted by community activists, community and institutional leaders, health care workers and police all of whom are supported and mentored by SASA! staff and provided with bi-monthly training opportunities. SASA! was evaluated using a community cluster randomised trial which ran over four years from 2008-2011 and found to be effective at reducing violence physical partner violence. The intervention has already been rolled out both nationally and regionally with approximately 80 sites using the materials by 2012.

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Figure 2. Intervention models according to the ecological framework



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Local systems level interventions

A recent review of health sector responses to IPV in low and middle-income countries found a few models of integration that are being replicated in many settings, often focusing on service provision at a secondary or tertiary level of health care. These services are provided through accident and emergency or women's health services, or at a primary level through reproductive or family-planning health services [16-17].

- **One-stop centres (OSC)** – have been designed to provide integrated health and legal support to survivors of violence against women and girls [18]. Implemented as a form of multi-sectoral case management, these OSCs provide health, welfare, counselling and legal services in one location, typically in or adjacent to a health facility, and also link to police services through referrals. Depending on the context, some OSCs focus on partner violence, while others deal with both partner and sexual violence. The OSC model has received considerable attention in developing settings as a best practice. In post-conflict settings in particular, OSCs have been a model for scaling up quality services. Originated in Malaysia [19], the model has since replicated in several countries in South Asia and Africa [16, 18, 20].
- **Screening for violence in health care settings** - while recent evidence from high-income countries indicates that routine screening in primary health care to identify asymptomatic abused women does not improve women's health [21-22], evidence does suggest that screening for IPV in the context of sexual and reproductive health services [23] and antenatal care [24-26] can be effective to prevent the recurrence of violence and improve other health outcomes. Such screening is being conducted in several countries, as an add-on to existing health services, in order to identify and support women in abusive relationships and optimise their health outcomes.

Overlaying VAWG components on existing large-scale programmes

Another category of interventions are add-on VAWG programme components, such as group-based gender equity education, collectivisation/empowerment activities or violence screening and response, that are delivered alongside or on top of large scale economic or social services. These include the following examples:

- **Intervention with Microfinance for AIDS & Gender Equity (IMAGE)** (South Africa)

The IMAGE project combined a poverty-focused microfinance initiative with a gender and HIV training curriculum called *Sister for Life*. The microfinance component was implemented by the NGO Small Enterprise Foundation targeting women above 18 years and living in the poorest households. Groups of five women served as guarantors for each other's loans and all five had to repay their loans before the group could qualify for further credit. Loan centres of about 40 women met fortnightly to repay loans, apply for additional credit, and discuss business plans. These meetings served as avenues for introducing the *Sister for Life* participatory learning programme to address intimate partner violence and HIV, starting with ten one-hour training sessions, covering topics such as gender roles, cultural beliefs, relationships, communication, HIV and domestic violence. In a second phase, the programme encouraged wider community mobilisation to engage both youth and men in the

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intervention communities, as a form of collective action. Women recognised as “natural leaders” by their peers undertook another week of training and then worked with their centres to address priority issues. The training curriculum was delivered alongside microfinance services by a separate team of trainers over a 12-month period [27]. This approach significantly reduced levels of intimate partner violence by 55% and improved household wellbeing, social capital and gender-equitable attitudes [28-29]. IMAGE is currently being scaled up in South Africa, reaching 15,000 additional participants as of 2011 [30], and is being replicated in Tanzania and Peru.

- **Empowerment/collectivisation for Female Sex Workers (FSWs) (India)**

Avahan, a large-scale HIV prevention intervention implemented in India, included a multi-layered district-wide component to prevent and address violence against the sex worker community that involved policy makers, secondary stakeholders (police officers, human rights lawyers, journalists) and primary stakeholders. This violence prevention strategy was embedded in a broader community mobilisation and empowerment approach, consisting of the formation of self-help groups, drop-in centres, formation of committees, strengthening of collective action, capacity building, mass events, advocacy and enabling environment. An analysis of intervention impact in 13 districts suggests that it reduced the experience of violence among FSWs in the past year (in the form of being beaten or raped) by 30% [31]. This intervention builds on previous sex worker mobilisation intervention, and is being further replicated in other regions.

Media social norms based models

The second type of replicable intervention models are large scale ‘edutainment’ or media campaign models that aim to transform social norms and behaviour at the *macro level* and can be combined with community level efforts to maximise impact. Examples of these programmes include:

- **Soul City series** (regional) - The Soul City Institute for Health and Development in South Africa supports an ongoing ‘edutainment’ programme through a weekly television drama that portrays characters confronting violence, HIV, alcohol abuse and other social problems. The typical series includes 13 one-hour episodes of primetime television series, 45 fifteen minute radio drama episodes, three booklets distributed at the community level and an advertising campaign on a related topic. Series four dealt specifically with partner violence and promoted new norms and community behavioural responses to violence. An evaluation in the form of a national survey found a consistent association between exposure to the series and both support-seeking and support-giving behaviour in response to violence. The series has run for over ten seasons in South Africa and the Institute is building regional capacity in delivering such programmes for social change in other countries [6].
- **Sexto Sentido** (regional) - The feminist NGO *Puntos de Encuentro* implemented a multi-faceted campaign to change attitudes, norms and behaviours around gender, violence and HIV, that included a national “social soap” television series called *Sexto Sentido*; a nightly youth talk call-in radio show; development and distribution of materials for use by local groups; and various community-based activities such as

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training workshops for young people, youth leadership camp, and coordination with local health and social service providers. *Sexto Sentido* was broadcast weekly in Nicaragua, as well as in Costa Rica, Guatemala, Honduras and Mexico. Exposure to the campaign was significantly associated with changes in knowledge and behaviours around domestic violence [6].

- **Bell Bajao** (India) - The Indian women's rights NGO Breakthrough implemented the *Bell Bajao* campaign with a two-pronged approach consisting of multimedia (television, print, radio, Internet and a video van), coupled with grassroots community mobilisation (trainings and workshops) to shift norms and behaviours around domestic violence and women living with HIV. A pre/post evaluation reported improvements in knowledge about women's rights under the domestic violence law and attitudes towards interrupting and taking action against domestic violence [6].

Based on the identified replicable models, there appear to be various types of effective interventions to consider for scale up, as well as combined approaches that intervene at the individual and community level, or the community and macro level, to maximise programme impact and potentially optimise value for money. Participatory approaches that target groups of men and women are likely to be scalable through different models of replication than macro media campaigns that could reach larger populations by virtue of the medium they use. VAWG programme components that are added on to large scale programmes to optimise synergies of addressing various economic and health needs of their beneficiaries, for example, represent an opportunity to leverage existing investments and optimise programme efficiency.

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3.2 Economic analyses of VAWG programmes

Cost analysis of interventions aimed at preventing or reducing violence against women and girls can provide insight for policy makers involved in budgeting and identifying resources required to implement and scale up programming. Cost data are also a critical input in cost-effectiveness analyses, the results of which can be used to examine issues related to efficiency and sustainability and to inform resource allocation decisions. This section and the next outline key issues in economic analysis with a focus on costing and cost-effectiveness studies.

Costing methods

The results of a cost analysis typically include the total cost of delivering an intervention or programme and the cost per unit of output or outcome measure. In general, costing studies include five steps [32]:

1. Identify the objectives of the costing study and decide on the perspective, scope and time horizon to be considered.
2. Describe the programme or intervention and identify key outputs or outcome measures to be used in calculating unit costs
3. Identify resources used to deliver intervention or programme
4. Measure resource use in natural units
5. Attach monetary value to resources and calculate cost per unit of output or outcome.

Within the steps outlined above, alternative approaches to costing may be identified. The approach to costing will determine the types of costs that are included and how costs are allocated to different programmes or activities. The following subsections outline the key alternatives.

- ***Costing perspective***

Costing of VAWG programmes may be conducted from a provider, client, or societal perspective. A costing conducted from the provider's perspective will include all costs borne by the organisation or group implementing or paying for a service or intervention. Costing conducted from the client perspective would consider only costs borne by clients or programme beneficiaries, such as travel costs or the cost of time taken to attend programme activities. This may also include cost savings such as reduced expenditure on health care or support services. In contrast, one may adopt a societal perspective which would include costs considered from the provider's perspective as well as costs to society. Costs to society may include costs to programme participants, the cost of lost productivity due to missed work or costs associated with accessing services outside of the intervention such as police or health care services [32].

- ***Costing scope***

The scope of a cost analysis may be narrow, focusing only on financial expenditure, or it may be broadened out to include economic costs. Economic costs represent the value of all resources used to deliver a programme or intervention. Where resources are paid for, the economic cost will often be the same as the financial cost. However, in many cases resources are donated or provided free of charge (such as volunteer labour). In these cases

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the economic cost may be estimated either by calculating the 'opportunity cost', or the cost associated with the next best use of the resource. For volunteer labour this may be the wage that an individual would expect to earn if they were working instead of volunteering and for donated goods, this may be the purchase price (or market price) of the item.

The types of costs considered in a cost analysis will vary depending on whether the aim of the exercise is to value the full cost of programme implementation or to determine the cost of adding on an additional programme onto existing activities. A **full costing** typically includes all direct and indirect costs associated with delivering a programme or intervention. This means that in addition to costs related directly to implementation, overhead, management and administrative costs are included in the final cost estimates. In contrast, **an incremental costing** approach would consider only the cost of implementing a programme or intervention over and above *existing* activities [33].

In terms of their usefulness for policy makers, it is important to note that these approaches differ in the implicit assumptions about the capacity that organisations have to deliver additional programming. The use of an incremental costing approach implicitly assumes that organisations have the excess capacity to add interventions at no additional cost, whereas a full costing makes no such assumption [33].

- **Costing time period**

The time period over which cost data are collected and analysed and the treatment of start-up costs will influence unit costs estimates, which may be presented on an annual basis or may represent the full cost of implementing a programme or intervention over a number of years. For multi-year programmes, costs are typically considered in the year in which expenditure or resource use occurred. However, where significant up front investments are required to launch a new programme or intervention, start-up costs may be annualised over the course of the programme reflecting the value of the resources required to implement the programme [33]. This approach is used to reflect the present value of initial investments and adjust for inflation over time [32].

Many projects are launched on a small scale and may have significant start-up costs incurred at the beginning of the project when staff are recruited and trained and equipment and office space is procured, as noted in the interventions identified. These costs then contribute toward the total programme cost that is ultimately used to estimate average cost estimates. These large initial costs are often considered fixed costs because they are required to run a project regardless of scale.

As projects are scaled-up, initial costs or fixed costs are spread over a larger number of beneficiaries, typically resulting in lower average costs per unit of output or unit of benefit, a concept known as economies of scale. However, further inputs may be required in order to expand coverage and deliver services to a wider audience. Additional resource requirements may include purchasing equipment, hiring vehicles, expanded office or activity space, hiring additional programme staff and additional staff training. Each of these elements will contribute to a higher total project cost which may result in higher unit costs, or diseconomies of scale. As a result, unit cost estimates from small scale projects may differ substantially from estimates derived from the same intervention once it is scaled-up.

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- ***Approach to analysis***

Collection and analysis of cost data may be conducted using a top-down or bottom-up (also called micro-costing or ingredients based costing) approach. Top-down approaches require the analyst to identify total amounts and allocate portions to different cost centres or programme activities. This is often done using financial records whereby each line item is allocated based on proportion of use by different activities. This approach can be straightforward where there is only one programme being costed and all expenditures relate to a single budget. Top-down costing is likely to produce more accurate results when the main cost driver is medical technology [32]. However, where the cost structure is unknown top-down approaches may not be useful in identifying cost drivers and may provide little insight into areas where efficiency gains can be made [34].

Using a bottom-up approach, all inputs necessary to produce a unit of output are identified and valued. This figure is then multiplied by the number of outputs produced. Bottom-up costing is often done using input prices and activity records and the cost producing a unit of output can often be directly allocated to activities or programme areas. However, it can be difficult to capture overhead and administrative costs using this approach. Bottom-up approaches are likely to be more accurate where implementation involves multiple organisations and may be more useful in identifying areas where efficiency gains may be made [32, 34].

The most appropriate methodology for a given costing study is usually determined by the objectives of the costing. For example, a cost analysis may be used to value resources used to deliver a facility or community based prevention programme in order to inform programme budgeting processes, to identify resources required to expand or scale up a programme or to identify areas for improvement in programme efficiency. Where costing exercises are planned prospectively it is possible to incorporate cost data collection into routine data monitoring and evaluation work, thereby ensuring that all data required for analysis is available. Where costing is conducted retrospectively, the type of analysis that can be done is often limited by the data that is available.

Given the range of alternative approaches that can be taken when planning and conducting a cost analysis, there is considerable scope for variation in practices which can lead to difficulties in comparing cost estimates. Standard guidelines do not provide sufficient detail on how to handle challenges specific to research conducted in specialised fields leading analysts to adopt different ad hoc approaches. In response to this a number of agencies have developed guidelines on costing interventions to try to promote a standardised approach to costing [33, 35-37]. Costing guidelines specifically for violence prevention programmes will be produced in 2015 by LSHTM, funded by an anonymous donor. These guidelines will form an important resource for the 'What Works' programme and should be used in future evaluations that are supported in order to ensure that cost analyses are conducted in a transparent and consistent manner and allow for comparison of cost estimates where appropriate.

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Issues in cost analysis

Sources of variation in unit cost estimates may be related to costing methodology, the nature of the programme or intervention being evaluated, or factors related to the context in which the intervention is implemented.

Unit cost estimates included in economic evaluations are commonly calculated by taking the total cost of a programme and dividing this by some measure benefit such as outputs or impact measures. Outputs may include the number of beneficiaries or number of activities conducted and impact measures relate to cases of violence prevented or disability-adjusted life years (DALYs) averted. The final average unit cost estimate is then a point estimate relating to costs and benefits accumulated over the course of a project, representing a snapshot of the relationship between cost and benefit at a particular point in time and for a particular volume or scale of service delivery (see

Figure 3). In addition to average costs, marginal costs, or the cost of expanding service delivery by one additional unit (for example, the cost of seeing one more client) are estimated.

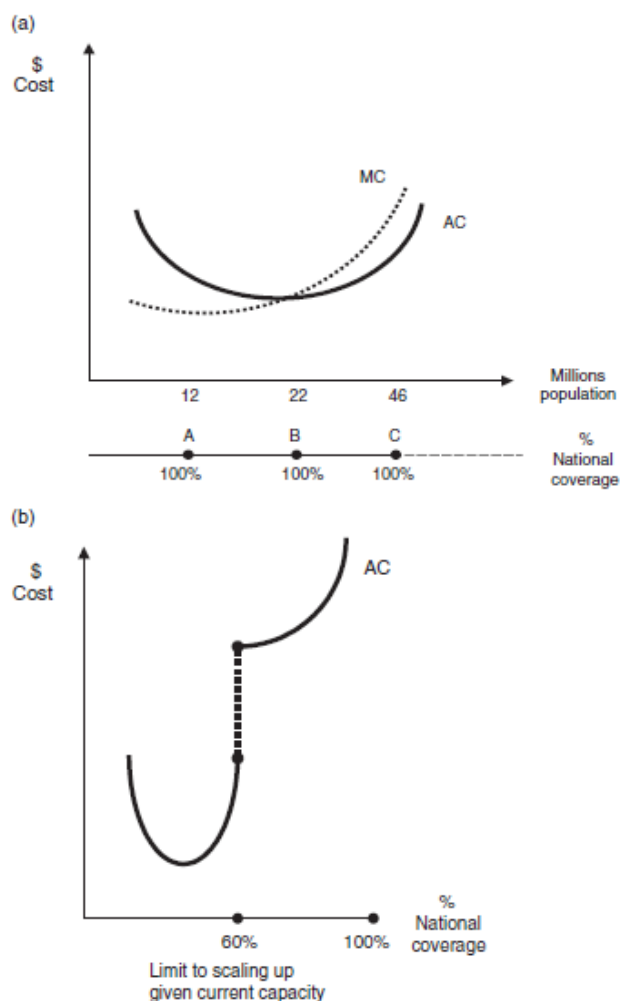
Scale is a major determinant of intervention or programme unit costs. The more outputs among which to spread the fixed costs of an intervention, the lower the average cost will be. Evidence from health interventions corroborates this scale effect, with 26-70% of the variation in unit costs being explained by variation in scale [38-39]. However, after a certain point (where marginal cost (MC) exceeds average cost (AC) in

Figure 3a) so-called diseconomies of scale are observed, as it becomes more expensive to reach the remaining hard-to-reach populations or as systems reach their capacity and require large new investments (in infrastructure, human resources, equipment, etc) in order to be able to serve more people [38, 40].

As programmes may operate at different scales, similar programmes may be delivered using different combinations of inputs to produce the same (or similar) outputs. In economic terms, the process by which inputs are transformed into outputs, or outcomes is known as technical efficiency. A technically efficient production process uses the least amount of inputs to produce the maximum possible improvement in a specific health outcome [41]. In practice, implementers may use a different mix of inputs (for example, paid staff or volunteers) or deliver interventions at different levels of intensity. As programmes mature, staff may become more comfortable or competent in their roles which can lead to more efficient use of time and resources. Such variations in technical efficiency are a common source of variation on unit cost estimates across settings [42].

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Figure 3. Cost implications for scaling up interventions



Source: Kumaranayake (2008)

Variation related to intervention context

Just as unit cost estimates are a snapshot of the relationship between cost and benefit at a particular point in time or scale of service delivery, estimates are also a reflection of a myriad of factors related to the context in which the intervention is delivered. These may include geographical location, prices of inputs and complementarities with other activities. For example, interventions operating in rural areas, programme participants may be more difficult to reach or programming may need to be scheduled around rainy seasons or agricultural activities. In terms of the price of inputs, shortages of foreign exchange or import duties may lead to variation the price of imported inputs, such as equipment or supplies. Even the cost of domestically sourced items such as labour may vary across settings either due to differences in wages or availability of volunteer labour.

Similar to the issue of scale, unit cost estimates may vary as a result of economies of scope. Economies of scope occur where the cost of producing two or more outputs together is less than the cost of producing them separately. This may arise as a result of programme

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synergies or shared overhead and administrative costs. In their analysis of post rape care services provided in two sites in South Africa, Christofides et al. [43] noted that lower unit costs in one site may be explained by economies of scope realised in the site providing post-rape care, domestic violence and community empowerment services since these services utilised shared inputs and overheads.

In order to understand how average cost estimates change over time or as an intervention is expanded or scaled up, to identify variation in technical efficiency in service delivery or to identify the impact of economies of scope, multiple average cost estimates are often required in order to plot an average cost curve and observe the changing relationship between cost, resource use and outputs. This approach requires either multiple cost analyses of an intervention as it expands over time, or costing multiple sites involved in implementing the same intervention at different scales. If a sufficient number of observations are available, econometric analysis may be used to identify variations in technical efficiency and estimate marginal costs which can provide insight into the likely change in costs as programmes are scaled up. To date, this type of analysis has not been conducted in the field of VAWG, likely in part due to a dearth of cost data and lack of comparable cost estimates. As VAWG programming expands, opportunities for this type of work may arise, providing valuable insight into the cost structure of different types of interventions, the potential for economies of scale associated with scale up, and gains (due to service synergies) that may be made from combining services.

3.1 Issues in cost-effectiveness analysis

Economic evaluations involves the comparison of alternative courses of action in terms of both costs and consequences [44]. Thus, the outputs of economic evaluations are commonly reported as cost-effectiveness ratios or benefit-cost ratios, whereby the difference in costs associated with a particular course of action are divided by the difference in benefits. Evidence from economic evaluations is meant to inform the operational prioritization of interventions representing the best value for money. Different types of economic evaluation methods exist, each responding to specific objectives and of relevance to different levels of decision-makers [45-46]:

- Cost-effectiveness analysis (CEA) considers natural units as outcome measures, such as years of IPV averted.
- Cost-utility analysis (CUA) is strictly speaking different from CEA (although it is often perceived as similar) in that it typically considers composite measures of both morbidity and mortality, such as Disability-Adjusted Life Years (DALYs) or Quality-Adjusted Life Years (QALYs).
- Cost-benefit analysis (CBA) measures both social benefits and costs in monetary units, in order to ascertain whether the benefits of an intervention outweigh its costs (or whether the benefit-cost ratio >1).

Below we outline some of the key challenges in generating and comparing economic analyses and applying the results of such analyses across different settings.

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Economic evaluations are driven by comparison. The most relevant comparison from a policy perspective is often the gold standard or current practice. However, where there are no established guidelines or no existing policies in place, interventions may be judged against a 'do nothing' scenario. In either case, both the comparator and the intervention must be adequately described in order for policy makers to determine the extent to which the results may be applied across settings. In the case of VAWG programming, policies and practices may vary dramatically across settings, presenting a challenge in comparisons of intervention impact. For example, in cases where cost-effectiveness analyses have used the same comparator in an area with similar underlying prevalence of violence and associated risk factors, the results may vary as a result of differences in implementation, acceptability of the intervention among the target population or individual characteristics of participants. For example, the impact (and thus cost effectiveness) of cash transfer programmes on outcomes such as early marriage practices or school attendance will be influenced by initial rates of early marriage and school attendance as well as intervention coverage and acceptability, all of which are likely to vary across settings.

Economic analyses of health interventions tend to focus on CEA/CUA [47], thereby avoiding the need to make inherent value judgments about the monetary value of a statistical life year or a year free of violence, which are both controversial and context-specific, and the greatest disadvantage of CBA [46]. When it comes to broader structural interventions that are likely to be required to prevent VAWG, CEA and CUA may adequately capture the cost of a year free of violence or value of the related health DALYs averted [48-51], but there is little sense of what represents good value for money in VAWG since so few analyses have been conducted and because it is unclear what society may be willing to pay for a year of violence averted, for example. A further challenge is that DALYs estimates relate to lifetime exposure of violence and so are not useful for estimating the benefit associated with preventing further exposure to violence in women and girls who may have already experienced violence. These approaches are also limited in the effects captured since they only incorporate health related benefits and miss broader socio-economic outcomes.

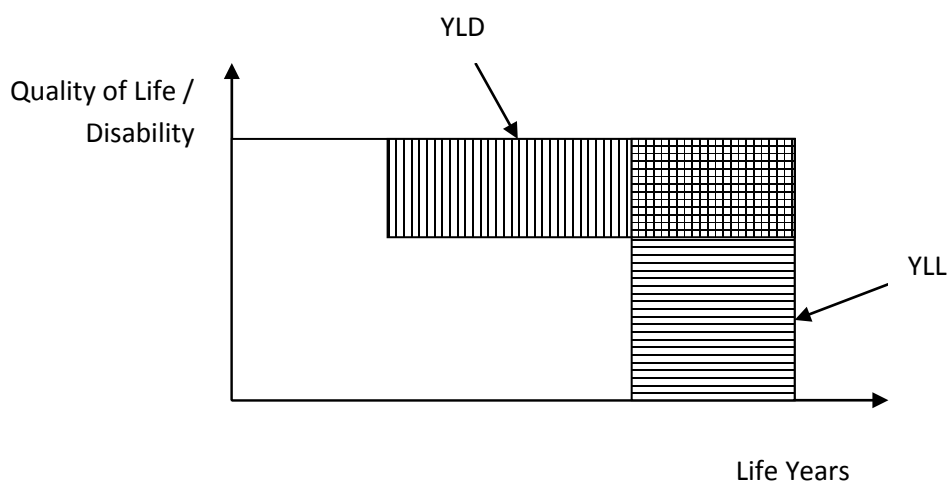
Prevention interventions are often evaluated using intermediate or process indicators, such as the number of clients reached or the number of services delivered. These effects may be valuable from a programmatic perspective, but final outcomes such DALYs averted or measures of net monetary benefit would be preferable for the economic evaluation of VAWG prevention as they enable broader comparison across interventions. Unfortunately final outcome measures are often unavailable² and analysts may be forced to rely on modelling exercises to estimate final outcomes based on intermediate measures such as person years free of violence [33]. In the case of violence prevention programming, the time period of analysis may not be long enough to establish a clear link between programme activities and final outcomes or to observe how long a protective effect may last. This is critical to the calculation of both QALY and DALY estimates since both require the analyst to make some

² Comparison of outcome measures requires a counterfactual or base case scenario. For example, in order to conduct a cost-effectiveness analysis using the cost per case prevented as the outcome measure, data on the prevalence or incidence of violence in the absence of the intervention is required. These data may be readily available if the analysis is conducted alongside a randomised trial. However, measuring impact, and generating the necessary outcome measures to conduct a full economic analysis can be difficult when conducting operational research.

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assumptions about the link between intervention impact and future related morbidity and mortality (see Figure 4). For example, an analysis assuming that intervention effects are sustained for two years or five years, after which participants' life course returns to a trajectory matching those of individuals who did not receive the intervention (meaning that rates of violence are again similar) then the QALYs gained/DALYs averted will be fewer than if intervention impacts were sustained until death or had an impact on long term survival.

Figure 4. Illustration of DALY calculation and long term intervention impact



$$\text{DALY} = \text{YLD} + \text{YLL}$$

YLD = Years of life lived with disability (less than perfect health)

YLL = Years of life lost due to premature mortality

A well-documented limitation of the most widely used CEA/CUA tools with single-outcome analysis frameworks is their inadequacy when it comes to dealing with interventions that have multiple, cross-sectoral outcomes [52-53]. The absence of a common outcome metric across sectors may cause problems for economic evaluation, and although there have been several efforts to develop more encompassing indices of well-being that incorporate the multiple attributes/benefits that people value, they have not, to date, become widely used in economic evaluation or prioritisation [54].

In many cases, CEA and CBA calculations may seem straightforward, yet questions about the comparability or generalisability of cost-effectiveness and cost benefit ratios may make it difficult for policy-makers to determine whether investing in a particular programme represents good value for money [55]. In theory, the use of composite measures of benefit such as DALYs or QALYs should facilitate comparison of interventions in different health-related fields (allowing comparison of VAWG programming and immunisation programming from a health perspective, for example), but the lack of a standardised DALY measure specific to violence has made it difficult for researchers and advocates to make such comparisons.

Given this, CBA would be the recommended economic method for VAWG prevention interventions with multi-sectoral outcomes [56], as it monetises all benefits of an intervention,

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thereby comparing costs and benefits in the same metric and allowing multi-sectoral outcomes to be considered [56]³. This would require, therefore, a monetary valuation of intervention outcomes, such as a year of violence averted, to be made. This can be quite controversial and some may object to valuing such outcomes in monetary terms.

It is also worth pointing out that CBA for violence has often been misunderstood as only assessing resource savings due to the intervention, such as savings in police service costs and health care costs that would have been incurred to deal with a case of violence and injury. Indeed, a number of large studies have been done quantifying the economic cost of violence, or the cost to society of not intervening to address VAWG [57-70]. However, this is not the direct benefit of the intervention (the societal value of averting violence is) and should actually be part of the estimates of net costs [71].

Combining this type of work with rigorous evaluation of VAWG interventions may provide new opportunities to estimate the overall societal impact of preventing and reducing violence and show the potential for associated cost savings, bolstering the case for investment in prevention efforts and interventions aimed at reducing violence against women and girls.

3.2 Current evidence on the costs and cost-effectiveness of VAWG interventions

Studies on the economic costs of VAWG have primarily aimed to estimate the economic and social costs associated with the occurrence of VAWG [57-70], rather than the costs of intervening to prevent it. Given our focus on scaling up effective VAWG programmes, we contained the review to summarising and assessing intervention costs. That being said, economic and social costs of not preventing VAWG could be important inputs into value for money assessments, as discussed above.

There is a serious dearth of evidence on the costs and cost-effectiveness of VAWG interventions. Although our focus is on low and middle-income countries, a recent review of economic evaluations of interventions to reduce IPV and improve outcomes for survivors only identified four studies in high-income countries [71]. Through a further search of more recent literature, we identified an additional three studies from high-income countries [72-74]. Two studies in the UK evaluated the cost-effectiveness of domestic violence training and support programmes in primary health care settings and found them to be cost-effective in terms of QALYs gained [75] and potentially cost saving when considering societal costs [72]. Another study from the United States analysed the costs of online trainings for health professionals, concluding that they were substantial (US\$ 75 per physician reached) and would require investments in demand creation to improve their efficiency [73]. A study from the United States found that an intervention targeting women with co-occurring mental and substance abuse disorders and a history of violence was effective at improving outcomes at no additional cost [76], while another study modelled the cost-effectiveness of a refuge

³ All of these methods are rooted in welfare economics and the concept of Pareto-efficiency, whereby a resource distribution is considered Pareto-optimal when it is not possible to make anyone better off without making someone else worse off (Gold, 1996). The more realistic and less-restrictive potential Pareto-improvement criterion forms the basis for CBA in particular, as it shows that a programme is welfare-enhancing if the benefits exceed the costs and thus the gainers would potentially be willing to compensate the losers, bringing the equilibrium closer to the Pareto-optimum.

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shelter for victims of violence in the US, finding that it was cost-effective due to cost savings and improved health through prevented violence [77]. Two studies conducted cost-benefit analyses of justice system policies and interventions, namely the 1994 Violence Against Women Act [78] and civil protective orders [74] in the United States, concluding that the benefits of such interventions to taxpayers outweigh their costs, when factoring in the value of violence prevented in terms of the health and justice system costs averted from needing to respond to violence.

Our review of studies from low and middle-income countries identified eight studies, of which five were for prevention interventions and three for post-rape services (see Table 7). Two of the prevention studies are not yet in the public domain (one is in the publication stage and the other is being written up for journal submission). Given the extremely limited evidence base, we decided to include all identified studies and assess the quality and implications of their cost and economic evaluation data in order to inform future scale up.

- **Scaled-up microfinance and gender/HIV training costs US\$16 per client**

The IMAGE trial is the only VAWG prevention intervention with a rigorous economic evaluation [79] and violence impact measure. The economic cost of the microfinance component was considered to be null, because of the high rate of loan repayments (99.7%), with interest fully offsetting the loan value and the NGO's administrative costs, making it financially sustainable and cost neutral.

The incremental cost of adding the gender/HIV training curriculum was estimated at US\$ 52 per client in the trial phase (855 clients) and at US\$ 16 per client in the initial scale up phase when the client base trebled (2,598 clients). This suggests that large efficiency gains can be realised through economies of scale, as the fixed costs of developing training materials, as well as training and deploying facilitators are spread over more beneficiaries.

The economic evaluation assessed the cost-effectiveness of the trial using a DALY measure, to estimate the health benefits of averting the health impacts of violence exposure, and did not attempt to put a value to the other potential benefits that may be associated with averting violence. Even using this relatively limited measure, the evaluation concluded that IMAGE was cost-effective in the trial phase (US\$ 9,262 per DALY) and highly cost-effective in the scale-up phase (US\$ 2,779 per DALY), using a South African cost-effectiveness threshold, and under the assumption that its effect on violence was preserved during scale up. The uncertainty around the trial effect estimates, due to the limited number of clusters enrolled in the trial, generated a wide range of cost-effectiveness estimates, but even for the lower bound estimate, the scaled-up intervention remained cost-effective in South Africa.

- **SASA! community mobilisation intervention cost US\$ 392 per community activist supported per year**

This community mobilisation intervention to prevent VAWG and HIV risk behaviours involved training and supporting community activists, community and institutional leaders, health care workers and police. During the four years of implementation from 2008-2011, approximately 351 activists were involved in delivering 12,037 – 20,223

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activities over the trial period. The total cost of implementation was US\$ 559,574 or US\$137,605 annually. This amounted to an annual cost of US\$392 per activist supported per year.

- **Promundo's Programme H cost US\$ 108 – 161 per male participant**

Promundo [80] implemented two intervention models through two NGOs in Brazil, i.e. interactive group education sessions for young men led by adult male facilitators; and the same group education with an additional community-wide 'lifestyle' social marketing campaign to promote condom use, using gender-equitable messages. These were delivered at small scale, with 250 and 258 young men respectively. A financial costing estimated that the group education model cost US\$ 108 per participant (US\$ 26,938 in total), while the combined model was US\$ 161 per participant (US\$ 45,865 in total). The combined model was therefore almost double the total cost of the group education model. On the effectiveness side, changes in gender norms did not appear to have been significantly greater in the combined intervention group, but they were for the HIV/STI reported behaviours.

The group education sessions cost \$3.90 and \$6.30 per participant per hour. Reducing the intensity of these sessions was suggested as a potential option to contain costs when replicated by resource-limited organisations. Moreover, these costs may be an underestimate, as they do not include the cost of developing the behaviour change communication messages and materials, which are important start-up costs for such approaches (almost eight times the costs of what is considered under start-up costs in this analysis). However, the analysis did not factor in the many other young men and community members reached by the 'lifestyle' social marketing campaign that involved posters, billboards and other materials, which would bring the unit cost down.

- **Soul City 'edutainment' campaign costs US\$ 0.16; \$0.01 and \$0.10 per person reached by television, radio and print media with the VAWG theme**

A full economic evaluation was conducted of Series four of Soul City's campaign in South Africa, implemented between 1997 and 2000. The total cost of delivering the campaign was estimated at US\$ 5.3 million, of which about 40% could be allocated to the VAW theme [81]. The programme's popularity and remarkable reach (82% of a national sample) explains its low unit cost. Indeed, since nearly all provider costs were fixed, i.e. did not vary with the number of persons reached (except the print costs), the scale effect was very significant.

The study also finds that the cost-effectiveness of the campaign was higher due to its joint media strategy (television, radio and print) rather than using only one medium. This appeared to enable more people to be reached (rather than the same people being reached multiple times) and may be a strategy to pre-empt diseconomies of scale by capturing those who may not be able to access television programmes without significant investments (buying a television for example).

- **Gender empowerment through community mobilisation for FSWs cost US\$ 19-21 per FSW reached at least once a year**

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An economic evaluation of the overall Avahan programme in Southern India was conducted, with a total cost of US\$ 4,178,910 from 2004-2011 [82]. In addition, a retrospective costing of the gender empowerment community mobilisation programme component was conducted. The findings suggest that the incremental cost of these activities was between US\$19 – 21 per FSW, reached at least once a year, which represented about 9% to 19% on top of the HIV prevention programme [83]. The study of the entire programme costs found that scale explained most of the cost variation between sites [84]. This is likely to be the case for this community mobilisation component as well, given the large share of total costs (57-60%) that were incurred above the NGO/service level, by the centralised state-led partners and at the higher programme level, representing significant fixed costs. Personal communication with researchers suggests that an economic analysis of the costs of the violence-related components is ongoing, with the aim of completing this analysis by the end of 2014.

- **Integrated post-rape health care cost US\$ 31 – 1,167 per rape survivor [20, 85]**

In South Africa, three models of post-rape care have been fully costed separately, with estimated economic costs per survivor of US\$ 220, US\$ 488 and US\$ 1,167. In Kenya, the financial cost per survivor was US\$ 31. The large variation in unit costs of post-rape health care can be partially explained by different models of delivery, i.e. facility-based and community-based, the degree of task-shifting from health professionals to community volunteers, the package of services provided (in particular with relation to the ARV prophylaxis regimen and monitoring) and the different price levels. Different costing methods also greatly influence this, as the Kenyan study only considered financial costs, whereas the South African studies incorporated the economic costs of donated inputs, such as volunteer time. The considerable in-country variation, within the same study [85], however, suggests potential room for efficiency gains, provided that service quality was not compromised in the lower-cost model.

All but one of these eight studies were from the grey literature (with another one still being in submission with a peer-reviewed journal and one being under preparation). All of them contained empirical cost data and most (6) reported economic costs that corresponded to the opportunity cost of investing in the intervention, including donated inputs, such as volunteer time. All studies estimated costs from a provider perspective, thus considering the implementation costs to the government or NGO service provider.

This could hide considerable patient/participant/community costs, whereby seemingly low-cost interventions may in fact have substantial costs for women and communities. Another important weakness of the cost data is that most estimates are from single sites and small-scale pilots, making it difficult to generalise and use them to inform scale up costs. Most provided a detailed cost breakdown of their total and/or unit cost estimates, which allows for more in-depth analysis of resource use. Also, given the many assumptions made in costing exercises, it is a limitation of the data that only the IMAGE study [79] and the FSW collectivisation study [82] conducted sensitivity analyses of their costing assumptions.

Finally, only two of the studies analysed cost-effectiveness for a violence outcome, rather than presenting a unit cost, and a similar analysis is being planned for the SASA! trial. These

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two studies are currently the only ones comparing costs to an actual impact outcome (reduction in the past-year experience of violence), illustrating the limitations of the current evidence base.

The variation in costing methods suggests the need for standardised costing guidelines that would be systematically applied for VAWG intervention trials to generate more economic evidence. In particular, considering economic costs and a broader societal perspective, appears key for many VAWG interventions that rely extensively on community structures and volunteer labour, as well as require substantial amounts of time commitments from programme participants.

4. Conceptual frameworks for value for money

Interventions to prevent VAWG need to be cost-effective and financially feasible in low and middle-income countries before recommendations for their scale-up can be made. This is where the value for money argument will become particularly important.

One of the key lessons from this review is the absence of a common violence outcome and the lack of a common societal value for violence prevented. The few studies that have attempted to value violence prevention, essentially attempted to translate violence into its health outcome equivalent, i.e. mortality and morbidity averted, as done for IMAGE and/or based on the social costs averted, as done in two studies from high-income countries [77-78]. A standardised approach to valuing violence prevented is lacking, even if the focus is on healthy life or quality of life from a health perspective.

Table 2. Transforming IPV-free year gained into DALYs averted

	<i>n</i> / %
1. Absolute number of DALYs due to IPV in South Africa (Norman <i>et al.</i> 2009)	319 135
2. Female population >15 years (Statistics South Africa 2006)	18 784 600
3. Prevalence of women >15 years reporting IPV in past 12 months (Norman <i>et al.</i> 2009)	18.4%
4. Number of women >15 years reporting IPV in past 12 months in South Africa (2 × 3)	3 456 366
5. DALYs / woman experiencing IPV past 12 months (1/4)	0.0923

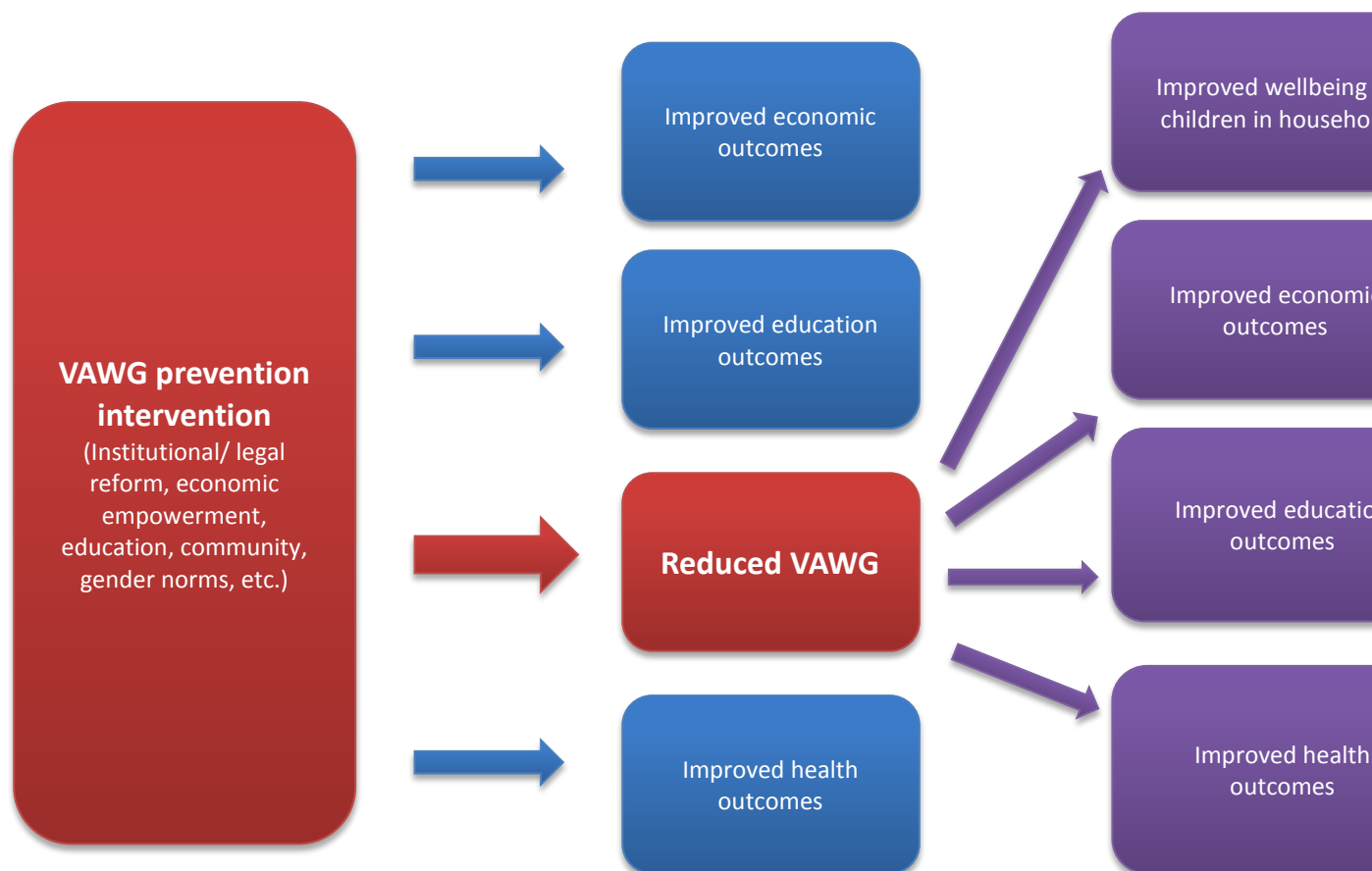
Source: Jan *et al* (2011)

Conventional approaches to assess value for money would compare the value of the VAWG outcome to the full cost of the intervention (illustrated as the red value chain in Figure 5), while ignoring all the other direct economic, health and/or educational outcomes of a specific intervention (in blue), as well as the indirect impacts mediated by the reduction in VAWG (in purple). Based on this simple value chain, certain interventions that aim to tackle broader structural inequalities and development challenges may not appear to be good value for money from the perspective of preventing VAWG alone. The same may be true when looking at this equation from other single sector perspectives, leading sector budget holders

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to decide not to fund or scale up such interventions despite their significant societal benefits. This would represent a welfare loss for society and an inefficiency in resource allocation [86].

Figure 5. Illustrative potential chains of benefit associated with VAWG prevention programmes



Note: Benefits in the second column are likely to have further impacts in the third column, or at least to link to each other, i.e. improved education outcomes would probably further improve health and economic outcomes.

The above discussion focuses on how an economic case could potentially be made for investing in violence prevention. This is a relatively siloed perspective on programmes, which may not be appropriate for many forms of violence prevention that could also have multiple other benefits. A new debate that is emerging within the HIV field is that assessments of value for money should be careful about taking too siloed approach to priority setting and budgeting, as this may result in important interventions that could achieve multiple outcomes, not being funded. Instead, it has been argued that to overcome the inefficiency associated with such siloed budgeting, sectors could adopt a co-financing approach, whereby they would consider contributing to interventions with other benefiting sectors, up to the point that it is cost-effective in terms of their specific outcome [86-87].

Existing approaches for assessing the value for money of interventions with multiple outcomes seek to internalise the external benefits, thereby broadening the evaluation to a societal perspective [88-90], but are not at present extensively used in resource allocation by decision-makers. A co-financing approach, on the other hand, also minimises the risk that

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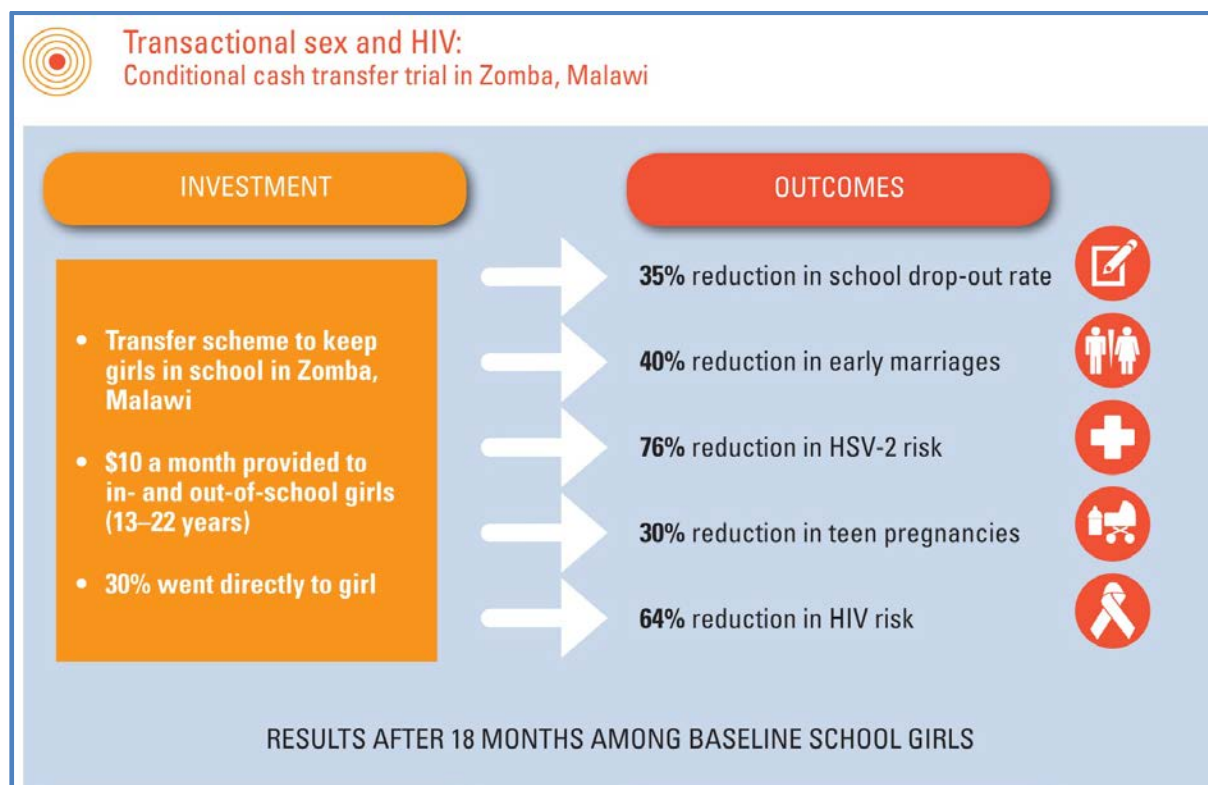
cross-sectoral benefits are foregone and could potentially be incorporated into a system where sectors budget separately. Decision rules based on cost-effectiveness thresholds could still support this approach as a potential method to explore the range of contributions from different sector budgets.

The approach has been explored based on data from a cash transfer trial conducted in Malawi to keep girls in school that generated multiple reproductive and sexual health, education and gender equality outcomes (see Figure 6). The analysis was part of the DFID-funded STRIVE structural drivers research programme consortium. Exploring the implications of this co-financing approach, it was concluded that where sectors would make financing decisions in isolation based on their own CEA (single value chain), the intervention would not be funded, but where they considered contributions from other sectors based on their willingness to pay for their own outcomes, the intervention would be fully funded and could potentially be taken to scale [86].

Approaches to preventing VAWG are likely to tackle several overlaying vulnerabilities and thus generate multiple outcomes [1]. For example, a recent study using DHS data in Malawi found significant associations between indicators of gender inequality (including IPV) and most health and development outcomes. Even after controlling for socio-demographic characteristics, indicators of gender inequality remained significantly associated with HIV infection, early pregnancy, high fertility, unplanned pregnancy, home delivery and indicators of poor child health (see Figure 7). Put differently, an intervention that would impact positively on gender inequality and IPV can be reasonably expected to have spillover effects on women's reproductive and sexual health, as well as their children's health. Merely incorporating the intervention's direct effect on IPV may therefore considerably underestimate the true societal value of investing and scaling it up.

Figure 6. Multiple outcomes of Zomba cash transfer scheme

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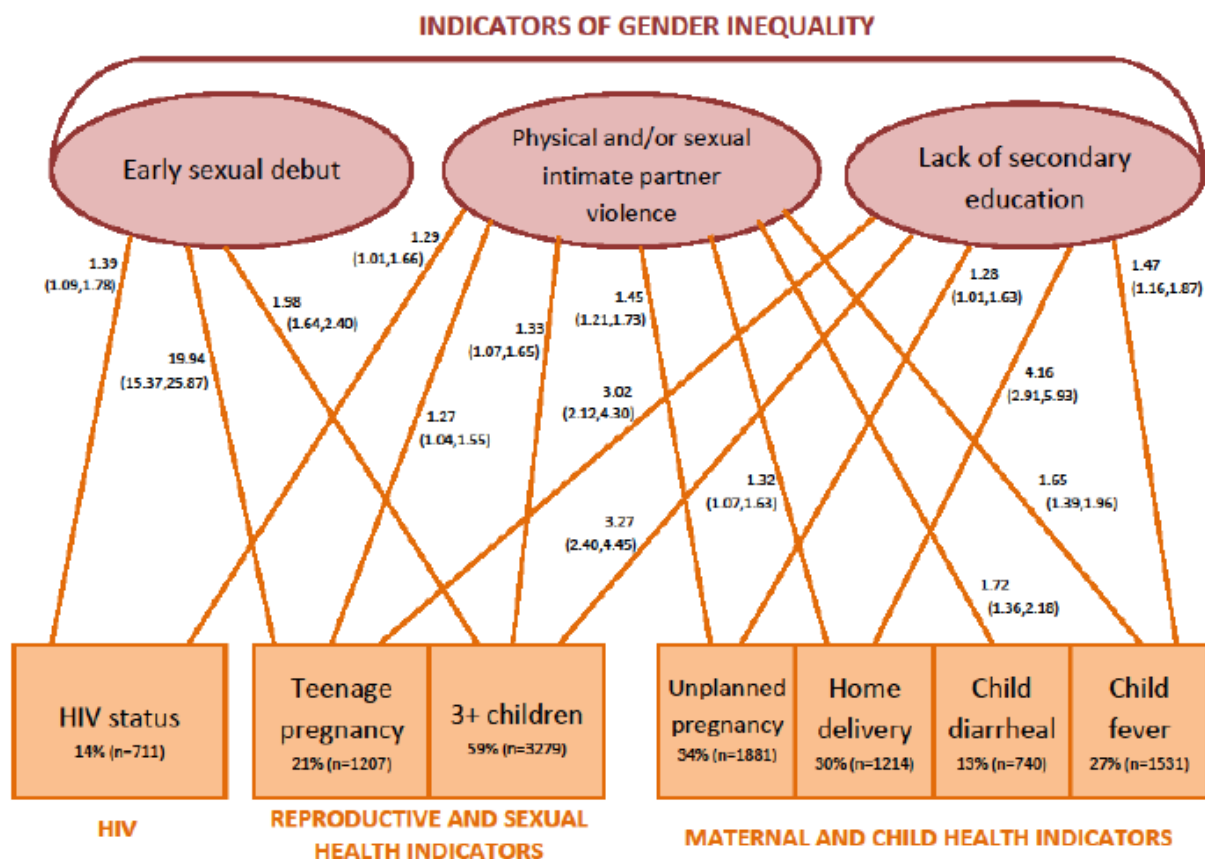
Source: STRIVE (2012)

The Give Directly unconditional cash transfer trial conducted in Kenya illustrates this reality further. After less than a year of transfers, the study reported a 30-50% reduction in reports of physical violence by the man against the woman and 50-60% reduction in reported rape within marriage [7]. This effect was larger when the transfer went to the woman, but there was still a significant effect when the man received it. In addition, the intervention had significant economic effects on the beneficiary households (80% more assets, 23% higher expenditures, 25% higher incomes), as well as effects on psychological wellbeing, evidenced by a significant decrease in levels of the stress hormone cortisol that may have mediated the impact on IPV.

Similarly, evidence from the *Oportunidades* cash transfer programme in Mexico also demonstrates impact on domestic violence with a decrease of 37% in households benefiting from a small transfer, possibly linked to the 15% reduction in alcohol abuse among husbands [8-9]. This is in addition to the many education, maternal and child health outcomes found for the programme that has been implemented at scale for over a decade [91-92], precisely because its cross-sectoral benefits were documented and taken into account.

Figure 7. Multivariate associations between gender inequality indicators and selected health outcomes

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Note: OR (95%CI) adjusting for women's age, poverty, urban-rural and regional differences

Source: Stoeckl et al (2012)

In order for economic evaluations of violence prevention to be fully assessed, it will be important for trials to consider what the likely breadth of outcomes could be achieved, and to measure these as a core trial component. Depending upon the forms of evaluation supported, i.e. experimental intervention trials, operational research or secondary analyses, it will remain important to identify feasible ways to capture a range of social, economic and health outcomes and incorporate this in any economic analysis.

5. Scaling up VAWG programmes

5.1 Definitions of scaling up

Scaling up programmes generally refers to expanding programme implementation to reach more people. In the health sector, WHO indicates that scaling up can be applied to inputs (financial, human, physical); outputs (access, scope, quality, efficiency); outcomes (coverage, utilisation); or impact (reducing morbidity or mortality) [93]. In all cases, the implications of scale up must be carefully considered, as there may be a trade-off at some point between achieving scale on the one hand and sustainability, equity or quality on the other.

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Increasing financial, human or infrastructural inputs is rarely enough for successful scale up, considering several other systemic constraints, such as unsupportive laws, weak management systems or limited demand. Scaling up therefore requires important strategic decisions and institutional adjustments, including the type and number of interventions to scale up, the role of various stakeholders and the financing, speed and sequencing of programme expansion [93].

A recent review of the concept of scale up in international health identifies similar issues, namely the costs of scaling up coverage, constraints to scale up, equity and quality implications and key service delivery issues [3]. The latter include decisions on whether to adopt vertical or integrated approaches, as well as developing a sound understanding of an intervention's complexity as a starting point to finding ways to overcome its specific scale-up constraints, such as human resources or reaching out to non-state actors as partners in service delivery.

The conceptual framework for scaling up development interventions developed by Uvin (1995) [94] distinguishes between the following four interrelated dimensions:

- **Quantitative** scaling up refers to the increased geographical spread of an intervention to reach more beneficiaries, either through replication in other locations or by increasing the beneficiary base in the same location. This can also be referred to as 'horizontal scaling up' or 'scaling out'. It is the most common use of the term.
- **Functional** scaling up entails expanding the scope of activity. It would involve an intervention or programme with a specific sector or functional focus to add components with other aims, such as a microfinance programme adding on gender and/or health components to provide a more comprehensive package of services to its beneficiaries. Some refer to such scaling up indirectly when considering options to 'overlay' certain services on to existing programmes or implementation platforms.
- **Organisational** scaling up involves the expansion of the implementing organisation, the involvement of other institutions/organisations, or the creation of new ones. A typical example would be the hand-over of an intervention or programme from an NGO to government.
- **Political** scaling up means expansion by influencing political interests and stakeholders in order to protect programme gains and affect institutional change that enables interventions to be scaled up and sustained.

Given the various types, levels and intensity of VAWG prevention interventions, different dimensions of scaling up may be of relevance. Quantitative scaling up is the aim for all these interventions, but may be the most applicable in this case to public services such as cash transfers. Functional scaling up seems particularly relevant to IMAGE, for example, which was able to gain access to a vulnerable target group and maintain a sustained contact for over a year, thanks to its concern for addressing the immediate economic priorities of participants through the underlying microfinance intervention [29]. Organisational scaling up may be applicable to community mobilisation efforts led by local NGOs and CBOs, while political scaling up would be possible once clear policies are in place guaranteeing comprehensive post-rape services or criminalising domestic violence.

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5.2 Approaches to scaling up

If a VAWG prevention intervention is deemed effective, replicable and scalable, various potential approaches could be considered for scaling it up. Hartmann & Linn (2008) present three institutional approaches and three organisational paths for scale-up (see Table 3). These are not mutually exclusive and a successfully scaled up programme is likely to combine elements of these approaches and paths.

The degree of transaction intensity and the degree of discretion influence the best approach to scaling up [95]. For example, community-based approaches tend to be transaction-intensive and require context-specific information, making them better suited for relational approaches than top-down, hierarchical approaches. On the other hand, services with high transaction costs that do not require much context-specific information can be provided by establishing standardised rules and procedures (e.g. micro-finance, life skills education in schools). Interventions that are not transaction-intensive, but require technically competent decision makers can rely on hierarchical top-down approaches, such as alcohol taxation [4].

Organisational paths will similarly depend on the type of intervention and the capacity and nature of the organisation that piloted it. A contextual model developed by a local CBO is most likely to be expanded through replication by other organisations, rather than by the original CBO with a very specific geographic focus (one or several communities) and accumulated community trust and credibility. Collectivisation for FSWs in India fits this case quite well, where a similar approach was delivered by several NGOs/CBOs [39, 82]. Akin to the franchise model in the private sector, the Avahan programme had a central entity that designed the intervention, supported and supervised its implementation by various NGOs across India, allowing it to reach several thousand FSWs [82]. On the other hand, a microfinance organisation or the public education system would be able to follow the expansion path and provide gender-equitable norms training, for example, to their large client base and pupils.

The concepts of spontaneous diffusion may be particularly relevant for social norm change and/or social diffusion models of VAWG prevention. It could work where a reasonable information and knowledge infrastructure is in place and is most relevant for basic ideas and technologies, such as mobile phones, or information about good practices [4], or where there is an active intervention focus on diffusing new attitudes and models of behaviour – such as seen in the SASA! model (according to personal communication with the researchers).

Table 3. Approaches to scaling up development programmes

Institutional approaches	Hierarchical	Top-down planned programmes, often driven by strong central leadership
	Individualistic	Bottom-up approach focused on short-term targets, which can motivate long-term engagement and scaling up based on the cumulative effect of individual interventions
	Relational	Aim to promote the accumulation of social capital through decentralisation, participatory methods and empowerment

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		techniques.
Organisational paths	Expansion	Scaling up a pilot to scale within the organisation that developed it
	Replication	Scaling up by organisations other than the one that developed the pilot (e.g. franchise model)
	Spontaneous diffusion	Involves the spread of practice/ intervention models largely of their own accord

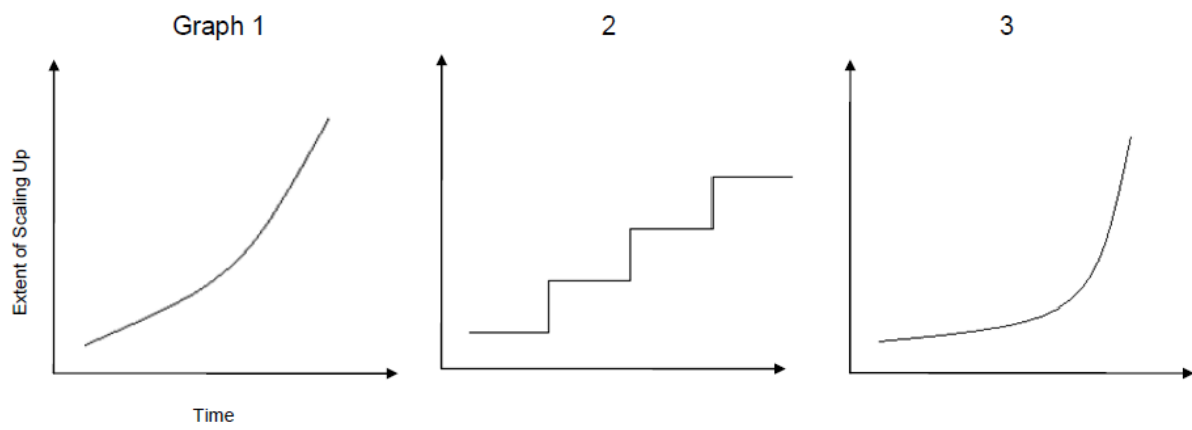
Source: adapted from Hartmann & Linn (2008)

Gericke and colleagues' developed a framework to assess intervention complexity to inform scale up [96], which analyses the intervention's characteristics (including the degree to which it can be standardised, potential risks), characteristics of delivery (including requirements in terms of human resources' skills, facilities, transport and communication); requirements on government capacity (including need for regulation, supervision, collaborative cross-sectoral action); and usage characteristics (including ease of usage, pre-existing demand).

Although the framework is tailored to traditional health interventions and the delivery of health technologies, it provides useful elements for consideration in future programming on violence, such as how adaptable is an intervention, what human resources does it require and are they available in various entry platforms, what government support does it imply (policies, legal reform/enforcement, cross-sectoral coordination and referral) and how can demand for the intervention be created to optimise its coverage and scale. Such considerations could be factored into costing evaluations of some of the main projects being evaluated under the 'What Works' programme, to ensure that alongside learning of the costs of programmatic inputs, learning about the potential scalability of interventions can be made.

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Figure 8. Scaling up – smooth, stepped and great leap



Source: WHO 2008 [93]

Another useful mental device for thinking about VAWG programme scale up is illustrated in

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Figure 8 [93]. The first graph shows a gradual or *smooth* scale up process whereby the organisation or system is able to cope with incremental increases in resources or activities – for example where a television series gains viewers through word-of-mouth demand creation. This could happen where excess capacity exists and some programme resources are not being used to their full capacity, allowing for incremental increases in scale without significant investments in additional resources.

In the second scenario, there are a series of *steps*, or bundled increases in resources required to enable scale-up, such as the one-off training of new staff, the construction of a new building, or the provision of training and support to a new NGO, to deliver a proven intervention in a new community.

As for the third graph, for the *great scale-up leap* to be possible, a major block or barrier needs to be surmounted, such as legislation, or the widespread adoption of a new social norm.

5.3 The costs and economics of scaling up

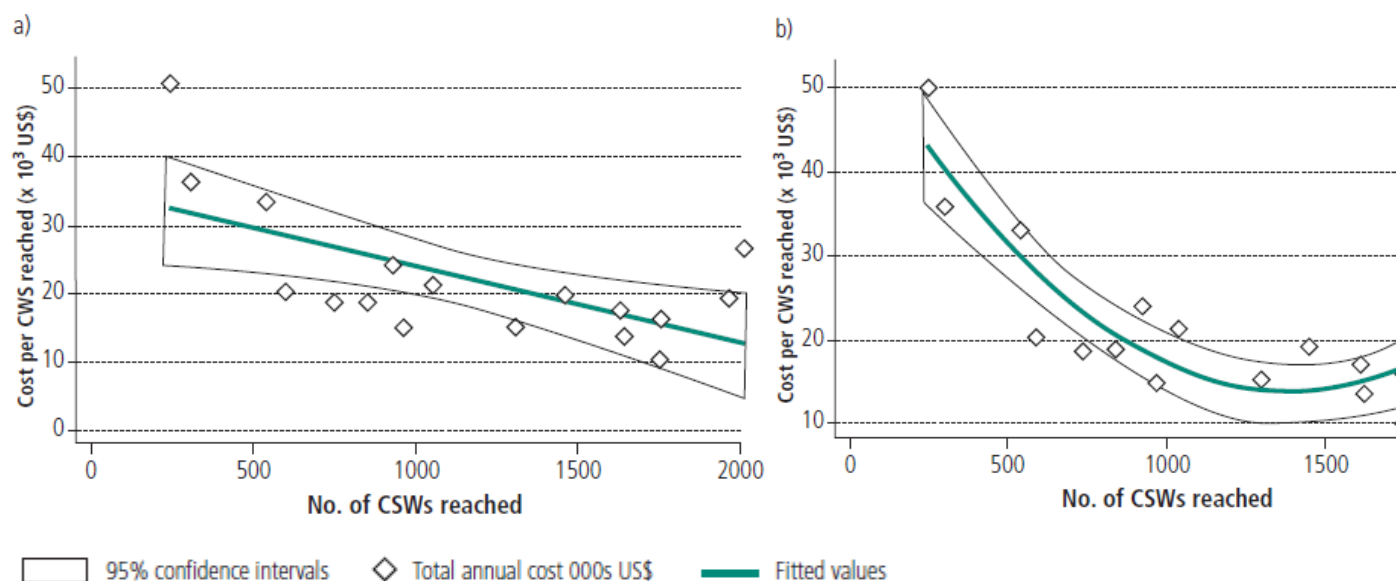
The economic theory and literature on scale up can explain both the expected influence of scale on programme costs, as well as the actual costs associated with the process of scaling up programmes.

When considering models of scale up, it is important to consider what may be the optimal scale of an intervention in its current form, and the degree to which activities can be sustained with increasing coverage. Commonly, there is an optimal scale at which programmes can operate, above which considerable adjustments would need to be made to the model [4, 97]. If so, the costs of such adjustments would need to be factored in.

The theory of economies and diseconomies of scale has been confirmed in practice when analysing the costs of HIV prevention interventions targeting FSWs in India [39]. As can be observed in Figure 9, unit costs do seem to have a quadratic function, whereby they initially decrease as service outputs increase (or more beneficiaries are reached), but after a certain point, they start increasing again, as it becomes more expensive to reach those additional people. This demonstrates empirically that there is an optimal scale of operation per NGO and that beyond this scale, it may be more efficient for another organisation to replicate the intervention.

Figure 9. Fitted regressions: (a) linear and (b) quadratic forms of costs per unit of scale for the HIV prevention interventions targeting FSWs

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Source: Guinness et al. (2005) [39]

In terms of the costs of intervention scale up, Johns et al (2005) conducted a review for health interventions and found that although these are specific to the type or intervention and its setting, the following principles could be used as a guide for VAWG programmes to generate the right type of data to inform future scale up [98]:

- 1) calculate separate unit costs for urban and rural populations;
- 2) identify economies and diseconomies of scale, and separate the fixed and variable cost components;
- 3) assess human resource availability and capacity [99]; and
- 4) include administrative costs, as they can represent a significant proportion of scale-up costs in the short run.

Based on the evidence identified around the costs of VAWG programmes, we have tried to analyse the costs with these components in mind (see Table 5). The IMAGE costing presents a clear case of economies of scale that were realised as the intervention started a quantitative scale up, going from an initial 855 client base to 2,598, thereby spreading fixed resources over more outputs and bringing unit costs down from about US\$ 43 to US\$ 13 (in 2004 USD). Personnel and consultancy costs were the largest cost category in both phases, i.e. 77% in the trial training costs, 95% for in the costs of developing training materials and 81% in the scale-up training costs. This underscores the importance of assessing the availability of human resources when planning to scale up such an intervention, either through existing staff in the implementing organisation that are underutilised (excess capacity) or by recruiting new staff. If the intervention does not require high-skilled labour, then it may be less challenging to recruit additional facilitators in rural communities with more social capital and possibly lower expectations of remuneration, than in urban settings, for example. This may be particularly important if existing *Sisters for Life* intervention staff would need to be trained during scale up, as the underlying assumption that they have additional time to allocate to such activities would need to be validated. During the scale-up of IMAGE, this did in fact emerge as a problem [30]. The IMAGE intervention has now been further scaled up. Based upon our preliminary discussions with other donors it is likely that a further economic analysis will be conducted. The findings of this research will provide important new

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information on how costs increase with scale.

Table 4. IMAGE Trial and Scale-up Costs

	Trial	Scale-up
Fixed costs (US\$)		
Buildings	110	110
Equipment	115	115
Vehicles	150	3281
<i>Development costs^a</i>		
Training—trial	26 707	26 707
Manuals	3254	3254
Training—scale-up ^b		13 520
Variable costs (US\$)		
Operational staff ^c	5429	
Supplies ^b	52	
Transport ^b	425	
Vehicle operating and maintenance ^b	37	
Building operating and maintenance ^b	32	
Total costs (US\$)	36 706	33 467
Per capita cost (US\$)	42.93	12.88
Baseline risk of IPV in previous 12 months (%)	11	11
Relative risk reduction (effect estimate from trial) (%)	55	55
Absolute risk reduction (%)	6.05	6.05
Cost per woman with an IPV-free year gained (US\$)	710	213
DALY / woman experiencing IPV past 12 months ^d	0.0923	0.0923
Cost per DALY averted (US\$)	7688	2307

Source: Jan et al (2011)

Most of the VAWG interventions appear to have proportionally large fixed costs, which is an indication that, in principle, they could become more efficient if delivered at larger scale, provided their quality and effectiveness is not compromised. After considerable start-up costs to develop training curricula and train facilitators, group education and community mobilisation have low variable costs. However, there will be a point when one facilitator cannot train any additional beneficiaries or when new training materials need to be printed, requiring a stepped-up bundle of resources to expand the services. Nonetheless, the initial sunken investment in training development should not be required anymore, unless the materials need to be substantially adapted to new settings.

The multimedia campaign model, including the Programme H's 'lifestyle campaign', are almost by definition largely composed of fixed costs. The few variable cost elements may be for print media that would need additional copies for every additional person reached. Moreover, if client costs had been considered in these cost analyses, they may have found variable costs that clients incur in order to have access to the different media, such as the purchase of a TV or radio set, the electricity/batteries and TV licence, and the time costs of watching/listening/reading the materials. Focusing only on the provider costs, it is clear that the larger the coverage, the lower the unit cost is likely to be, highlighting the need for strong

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demand creation and advertising to increase the efficiency of such programmes. Longer exposure may also be important to optimise meaningful behaviour change [100].

Community mobilisation lies somewhere in between, in that most of the costs are fixed costs for running CBOs and conducting outreach, while the target population can be reached at a larger scale than small group education session, providing the opportunity to reap some economies of scale.

Health sector interventions in response to VAWG, such as these post-rape services, are likely to be most efficient when integrated into existing health care infrastructure and services, thereby realising economies of scope. This was the case of the Thutuzela programme, which remains relatively costly, but has proportionately lower fixed costs, likely as a result of shared overhead and joint resources through its integration in a secondary level hospital. While stand-alone OSCs have many positive benefits for survivors, they may not be the most feasible or efficient approach to providing such services, particularly in areas with low prevalence of violence or low population density areas [18]. Integration of services through referrals may be more efficient.

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Table 5. Summary of Fixed and Variable costs in the Unit costs of VAWG prevention interventions identified

Intervention	Unit cost	Fixed costs					Staff
		Capital - buildings, equipment	Capital - trainings	Capital admin/other	Recurrent - staff	Recurrent - other	
Training/education sessions							
Gender and HIV training add-on to microfinance (IMAGE)	US\$ 43 per participant	1%	83%				15
- Trial							
- Scale-up	US\$ 18 per participant	7%	93%	0%	0%	0%	0
Gender-transformative peer education for men (Promundo)	US\$ 161 per participant per site		6%		21%	33%	23
- Group education + "lifestyle" social marketing campaign							
- Interactive group education sessions for young men	US\$ 108 per participant per site		10%		2.9%		54.9
Community mobilisation							
Collectivisation activities for FSWs (Avahan)	US\$ 19 per person reached at least once a year	54.2%			18.3%		
- Belgaum district							
- Bellary district	US\$ 21 per person reached at least once a year	46.0%			16.5%		
Community mobilisation and diffusion to transform gender-related power imbalances (SASA)	US\$ 392 per activist per year	2.1%	0.2%	1.0%	43.7%	47.0%	
Mass media							
Multimedia campaign including a television soap opera, radio and newspaper	US\$ 5.3 million			13.1%		87%	
- Campaign							
Post-rape services							
Integrated post-rape health care package (Refentse model)	US\$ 220 per patient	7%	33%		35%	22%	
- Including facility and patient-level costs							
- Excluding one-off development costs	US\$ 64 per patient	20.5%				69.5%	
Post-rape services	US\$ 1,169 per survivor		0.2%	1.6%	24.9%	3.1%	16.6
- Thutuzela programme							
- Thohoyandou programme	US\$ 488 per survivor	1.5%	0.4%		64.9%	7.2%	10.7
Provision of integrated post-rape care services (Kenya)	US\$ 31 per patient			16%			23

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Table 6. VAWG intervention models and evidence related to their potential scale up

Model of intervention	Cost evidence	Forms of inputs required	Potential economies of scale and/or scope	Potential scale up approach
Group-based education models	Start-up costs to design training materials are proportionally significant	Specialised labour (expert consultants) to initially design training materials and possibly to adapt them to new settings Ongoing supervision required from local systems/ structures	Considerable potential for economies of scale	Quantitative scale-up through replication Functional scale-up by overlaying these activities on large-scale programmes
Community-focused models	Materials and activities could reach many beneficiaries but difficult to assess coverage/ scale	Volunteers required from the communities to conduct activities and facilitate model diffusion Ongoing supervision required from local systems/ structures	Considerable potential for economies of scale	Relational scale-up Organisational replication Spontaneous diffusion
Local system-based models	Range of labour costs depending on level of task-shifting and facility-based or community-based provision	High-skilled health personnel or lower cadre personnel with more intensive supervision	Considerable potential for economies of scale and scope	Hierarchical functional scale-up of health system interventions
Overlaying gender/violence prevention components	Start-up costs to design training materials are proportionally significant	Excess staff capacity required in large-scale programmes to be trained to provide additional (training, screening) components Ongoing supervision required from local systems/ structures	Large potential for economies of scale and scope	Hierarchical functional scale-up
Media/social norms based models	Large fixed costs Marketing/ advertising important to optimise reach	Experts to develop messages and write screenplays, conduct marketing/ advertising research and delivery	Large potential economies of scale	Quantitative or organisational expansion scale-up
Structural systems level	Not available	Not available	Large potential economies of scale	Hierarchical political scale-up

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6.4 Platforms for VAWG programme functional scale up

Given how common and pervasive VAWG is globally and in all societies, it is best addressed through a multi-sectoral approach whereby various platforms and service delivery points are leveraged to expand effective prevention interventions and transform norms at all levels [1, 6]. In this section, we explore the most feasible entry platforms through which the identified interventions could be added and thus functionally scaled up. Approaches that intervene at the macro level are more likely to achieve widespread coverage, followed by community level and group-based interventions that tend to target the structural determinants of violence.

- **Schools and life skills programmes**

Reaching hundreds of millions of children around the world, primary and secondary schools are a major entry point for group education programmes aimed at changing social norms around violence and increasing girls' self-efficacy. Such interventions with the broader objective of transforming gender norms and relationships are already being implemented as part of in-school life skills and sexual education classes. In sub-Saharan Africa, the gender lens has often been brought in together with the HIV lens [101]. In Latin America, Programme H and its female-focused incarnation, Programme M, have used schools as delivery platforms to provide educational sessions and youth-led campaigns, often in a context where schools were not willing or able to address sexuality education, gender and violence.

The Gender Equity in Schools Movement (GEMS) is a curriculum developed to engage young girls and boys in school to reflect critically on inequitable gender norms and violence. It was piloted by ICRW in 45 public schools in Goa, Kota and Mumbai (India), both layered with the existing school curriculum and as an independent pilot. Demonstrated attitudinal changes through the programme, led to its integration in the curriculum of the 25,000 public schools in the Maharashtra state [102].

- **Poverty alleviation programmes**

- **Cash transfers**

Cash transfer programmes are currently estimated to be reaching between 750 million and 1 billion people globally [103]. Although initially piloted and evaluated in Latin America, 37 African countries now have national social protection schemes or are testing pilot transfer schemes. Moreover, China, India and Indonesia also have large scale programmes in operation, reaching millions of vulnerable households. Tweaking these programmes to optimise their impact on VAWG would be a very efficient approach to further increase their large scale impact. Depending on the context, this could entail specifying the sex of the household member that receives the cash, finding ways to target women with the lowest gender-equitable norms, as the impact on violence has been found to be most significant amongst them [10], or designing any conditionalities with violence prevention in mind.

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- **Microfinance**

Microfinance is increasingly viewed as an entry point for providing an array of services and achieving multi-dimensional development objectives, including poverty reduction and better health. With an impressive record of loan repayment rates in excess of 95%, microfinance has emerged as a financially viable mechanism for expanding access to much-needed financial capital. Given their target groups and means of operation, microfinance services represent a largely untapped opportunity to provide beneficiaries with additional services in order to optimise health-related positive externalities [104]. Over the past three decades, microfinance has provided millions of poor households with the financial boost they needed to start businesses and pull themselves out of the poverty trap. After its large-scale success in Asia and Latin America, microfinance has reached sub-Saharan Africa, where less than 10% of the 300 million economically active population has access to some kind of formal financial services. Home-grown financial services have been filling this gap, in the form of moneylenders, community savings groups and credit unions. More structured and flexible microfinance institutions are now being established and offering more diverse and sophisticated financial products to the poor [105]. In 2010, nearly 500 microfinance institutions reported providing services to over 8 million people in sub-Saharan Africa, for example⁴. And since not all institutions report, this is likely to be an underestimate. Nevertheless, coverage remains limited at about 1.5% of the adult population [106].

With its explicit and strategic targeting of women, microfinance has been a powerful means for deeper social transformation, as it appears to have contributed to women's empowerment, exemplified by increased reported self-confidence and independence [105]. However, due to prevailing gender norms and inequalities, some have pointed to the risk of increased intimate partner violence towards female microfinance beneficiaries by men who feel challenged as the household provider, based on their norms of masculinity [6, 107]. Microfinance alone cannot be the panacea for the complex process and transformation required for women's empowerment and gender equality, but it can serve as a critical ingredient. Adding a gender-focused training component to the financial dimension of microfinance could catalyse broader empowerment benefits while diminishing the risk of gender-related conflict [27].

- **Livelihood programmes targeting both men and women**

In much of sub-Saharan Africa, South Asia and Latin America, agriculture represents a major economic sector and the basis of rural livelihoods. Migration, urbanisation, conflict and the HIV epidemic have led to a further feminisation of agriculture in certain countries. Low yields and high food prices over the past few years have further exacerbated food security and left millions of people undernourished [108]. Limited access to improved agriculture technologies, inputs, credit and extension are key barriers to improved productivity [109]. Agricultural extension and advisory services have a critical role to play in transferring technological knowledge, stimulating adoption of improved practices and enabling farmers to become fully embedded in the agriculture knowledge system. Several government and NGOs are implementing agricultural livelihood programmes in order to provide skills and start-up inputs for poor households to exit the poverty trap.

⁴ The MIX MARKET™ is a global, Web-based microfinance information platform that was launched by the UN Conference on Trade and Development and expanded by the Consultative Group to Assist the Poor (CGAP).

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One example is the Farmer Field School (FFS), an innovative, participatory and interactive extension model, initiated in Asia and subsequently replicated across the world. Its objective is to build farmers' capacity to analyse their production systems, identify problems, test solutions and eventually adapt the practices most suitable to their farming system [110]. A typical FFS consists of nine to 12 half-day sessions of hands-on farmer experimentation and non-formal training to a group of 20-25 farmers during a single crop-growing season [111]. The approach has been used with a wide range of crops and has subsequently expanded to topics such as livestock, community forestry, water conservation, soil fertility management, food security, nutrition, health, HIV and gender. Such a training programme provides an entry point to reach men and women with gender group education sessions and address norms that condone VAWG.

- **Maternal and Child Health and Sexual and Reproductive Health Services**

Maternal and Child Health Services and Sexual and Reproductive Health Services could be valuable platforms to reach women of reproductive age and in relationships. Globally, from 2000-2008, 78% of pregnant women had at least one antenatal visit (but fewer than half received the recommended four visits). Nonetheless, in low-income countries, 39% of pregnant women received four or more antenatal visits during the same period [112], which represents a sizeable group that could be reached during a particularly vulnerable time in terms of IPV [113]. Moreover, contraceptive prevalence in the developing world (excluding China) was 54% in 2010 (31% in Africa, 67% in Asia, 73% in Latin America and the Caribbean) [114], suggesting that a considerable proportion of sexually active women are accessing such services through a health service delivery point. These service points that women access on a regular basis could be tapped to provide information on domestic conflict and violence prevention, as well as violence screening.

- **Community mobilisation**

Communities and community-based organisations play a key role in providing services to community members, but also in shaping norms. The importance of community mobilisation in achieving health and development objectives has been highlighted by the global HIV response [115]. Despite low levels of funding (between US\$ 15,000 and US\$ 17,000 per CBO in Kenya and Nigeria), community mobilisation has relied on volunteers and been able to achieve significant impact on HIV-related knowledge and behaviour, health service uptake and even HIV incidence [115]. Such community-based HIV interventions have already been used as platforms to functionally expand VAWG prevention programmes, such as the model from India, integrating violence prevention in the collectivisation and empowerment intervention for FSWs. Beyond HIV, community organisations could serve as invaluable resources to replicate effective VAWG prevention models that do not require specialised labour and benefit from volunteers that are embedded in communities and can translate group education models into locally-relevant content, as was the case with SASA! [14].

- **Workplace programmes**

Although formal sector employment remains limited in many low-income and even certain middle-income countries, millions of men and women could potentially be reached with low-cost incremental VAWG prevention programme components, delivered through small group education in workplaces. Programme H, for example, has targeted workplace programmes

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in Brazil to expand its reach (according to personal communication). This is particularly worth considering in order to reach more men, who generally have lower health-seeking behaviour and are less involved in community-based organisations [116].

- **Mass media**

In 2012, 72% of the population in the developing world owned a television, thereby reaching more people than other ICT services [117]. In SSA, radio ownership ranged from 12% in Cameroon to 46% in Sudan [118]. These are important media to harness when aiming to reach individuals at scale and transform macro-social norms around gender and VAWG. Households that own television sets may differ from those that own radios (as suggested by the Soul City evaluation [81, 119]), hence the importance of multimedia campaign strategies to optimise targeting efficiency [120]. That being said, despite the potential to reach high rates of population coverage, sufficient investment is required for advertising in order to create the initial demand for the programmes and sustain it, as was done with Soul City's television series.

- **Policies and legal reform**

Promoting policy change and legal reform have been central in the response to VAWG, through advocacy at various levels, as well capacity building of various stakeholders to ensure that where they exist, legal instruments are used to protect women and prevent violence through deterrence [6]. New policies and legal reform can be vital catalysts to enable the scale-up of certain interventions or uptake of messages that were previously counteracted or weakened by prevailing laws and policies, such as the legal provision for marital rape for example (which was not considered as rape in many countries) [121].

Similarly, macro-level economic policies can be effective at indirectly preventing VAWG by interrupting certain pathways that lead to violence, such as hazardous alcohol use among men, which has been found to be associated with the perpetration of IPV and victimisation of women [17]. Regulating financial accessibility to alcohol through taxation is the most effective yet least popular policy intervention [122-123]. Such interventions are challenging to implement due to the preponderance of homemade alcohol and the resistance from the beverage industry. However, global analyses have established that taxation is the most cost-effective intervention to prevent hazardous alcohol use in populations with moderate to high levels of drinking [122]. With price elastic demand and a very low incremental cost, increased taxation of alcohol could be a national-level intervention to prevent VAWG, in addition to several other negative externalities of hazardous drinking (i.e. traffic accidents, sexually transmitted diseases, etc) [106].

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6. Recommendations

The following recommendations arise from this review:

WG1 should seek to understand more about the pathways to intervention impact, as this could help inform the current understanding of key programmatic elements to scale up. Simplified models of intervention that have rationalised their components to only include the most effective elements are likely to be more adaptable and replicable, and also more efficient to scale up. Related to this, it would be important to determine what design tweaks could be made to existing large scale interventions without an explicit violence prevention objective, such as cash transfers, to optimise their impact on VAWG.

Grants should consider both evaluation of new models of intervention and also the replication of existing models, as this will both add to the weight of the current evidence and provide insights into the generalisability of findings across settings.

When prioritising interventions to evaluate, consideration of the potential cost and scalability of the model under evaluation should be made. In terms of research investments, alongside consideration of the potential validity and plausibility of impact of the intervention model, priority should be given to intervention models that by their very nature have the potential to reach large numbers of people, and /or have greater potential for scale-up.

Similarly, it is important that the research programme support operational research that can help provide insights into ways to ensure that violence prevention can be delivered at low cost (e.g. by the use of new technologies, by comparing short versus longer training programmes), that include diffusion components along with core training activities.

There are a number of important entry platforms that provide opportunities for the large scale delivery of violence prevention programming. The research programme should seek to ensure that at least some evaluations are of interventions that are embedded within these structures across different sectors, as this may provide the greatest opportunities for future scale up of effective interventions.

Given the limited evidence base on the costs of VAWG prevention programmes, large research grants should consider opportunities to cost existing programmes. Priority should be given to intervention models that have been implemented in multiple settings and/or at scale, to help inform future resource projections. Moreover, intervention trials receiving funding through the programme should include costing components and economic evaluations. These would be most useful to the violence field, if they used the standardised guidelines that are under development, for the sake of comparability and building a critical mass of economic evidence. It is recommended that such costing analyses collect, analyse and present economic costs from a societal perspective, as well as separate fixed costs and variable costs, as a starting point for analysing potential economies of scale and scope.

In addition, it will be important to link with WG3 under the RIF programme, which will focus on the economic and social costs of violence. The evidence generated will be critical inputs into societal cost-benefit analyses that seek to incorporate intervention costs and cost savings in the cost-benefit equation.

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Cases for the expansion of VAWG programming would be enhanced by a greater understanding both about what different intervention models cost, and how these change with scale. As described above, we would hypothesise that different models of intervention delivery will have different cost structures, and so have very different changes in unit costs as programmes are scaled up. Potential opportunities to cost interventions at scale, and where feasible, econometric analyses could be used to understand more the underlying cost structures of different models of intervention. Opportunities for this type work may be realised in partnership with the World Bank's Gender Innovation Lab 1.0 & 2.0 Projects, a collection of projects aimed at improving women's economic empowerment. Where projects have not already begun, there may be potential to add IPV-related questions into routine data collections for projects that are not already collecting these data. Where implementation has already begun, opportunities for adding IPV related data collection into end line or follow-up data collection may be explored. Costing of these projects may then provide a rich set of unit costs for IPV related outcomes which could be analysed to provide insight into the range of unit costs for similar types of programmes, how unit costs vary with scale and potential for changes in unit costs as projects are scaled up.

Assessing the value for money of VAWG prevention programmes would be best served by documenting multiple human rights, social, health and economic outcomes of these programmes, in order to make the case for their prioritisation, scale up and possible co-financing.

Related to this, there is an urgent need for standardised VAWG outcomes to be considered and used to translate outcomes into society's or policymakers' willingness to pay for such benefits. The first step, which is an ongoing effort, would be to estimate how many DALYs would be averted from a year free of violence. This would allow for violence interventions to at least be considered alongside health interventions. However, the next step would be to explore methods of estimating society and decision makers' willingness to pay for a year-free of violence, based on the range of direct and indirect benefits across sectors.

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Table 7. Summary of VAWG intervention cost and cost-effectiveness studies identified

Intervention, Study	Setting & Target population	Intervention description	Costing scope and methods	Total cost (2012US\$)	Unit cost (2012 US\$)	VAWG Effectiveness and Cost-effectiveness ratios (2012 US\$)	Interpretation and limitations
Intervention with Microfinance for AIDS & Gender Equity (IMAGE) Jan et al, 2011	South Africa (rural) 12 loan centres 1) 855 poor women in initial 2-year trial phase 2) 2,598 poor women in 2-year scale-up phase	A gender and HIV training component was added on to a microfinance intervention. The 'Sisters for life' training curriculum consisted of 10 fortnightly one-hour training and discussion sessions addressing issues such as gender roles, cultural beliefs, relationships, communication, IPV and HIV.	Empirical Incremental, economic costing Provider perspective Ingredients approach	1) US\$ 44,222 2) US\$ 40,320	1) US\$ 51.77 per participant 2) US\$ 15.56 per participant	1) US\$ 855 per woman with IPV-free year gained US\$ 9,262 per IPV-related DALY 2) US\$ 256 per woman with IPV-free year gained US\$ 2,779 per IPV-related DALY	<ul style="list-style-type: none"> Highly cost-effective Multiple outcomes not included in analysis, i.e. reductions in risk behaviours, increased reproductive condom use, increased household revenue, improved gender attitudes
Peer education to transform gender norms Pulerwitz et al, 2006	Brazil 2 NGO sites 258 young men 250 young men	Two intervention models: 1) Interactive group education sessions for young men led by adult male facilitators 2) Group education + community-wide "lifestyle" social marketing campaign to promote condom use, using gender-equitable messages.	Empirical, full financial costing Provider perspective Top-down approach	1) US\$ 45,865 2) US\$ 26,938	1) US\$ 161 per participant 2) US\$ 108 per participant 3) US\$ 5.09 per participant per hour of group education (\$ 3.86 – 6.31)	At 6 months follow-up, agreement with inequitable gender norms items significantly decreased in both intervention sites, with 10 and 13 out of 17 items (on GEM scale) improving in intervention sites, compared to 1/17 in the control site	<ul style="list-style-type: none"> Cost-effectiveness ratios were not estimated in this study, so it is unclear if it is cost-effective Limitations: excluded the cost of condoms and other donated inputs, no sensitivity analysis
SASA! Michaels-Igbokwe et al, under preparation	Uganda 8 communities in Kampala	A cluster randomised controlled trial of a community mobilisation intervention aimed at changing community attitudes, norms and behaviours related to the power imbalances between men and	Empirical, full economic costing	<ul style="list-style-type: none"> US\$559,574 (four years) US\$137,605 (annual) 	<ul style="list-style-type: none"> US\$392.00 per activist supported per year US\$27-\$46 per activity 	Not yet available	<ul style="list-style-type: none"> Cost-effectiveness ratios have not been calculated at present but the analysis is ongoing

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Intervention, Study	Setting & Target population	Intervention description	Costing scope and methods	Total cost (2012US\$)	Unit cost (2012 US\$)	VAWG Effectiveness and Cost-effectiveness ratios (2012 US\$)	Interpretation and limitations
		women that contribute to violence against women and increase HIV risk behaviours.					
Community mobilisation and gender empowerment for female sex workers Vassall et al (in submission)	India 2 districts: 1) Belgaum 2) Bellary 9,680 female sex workers	This comprehensive HIV prevention programme for high-risk populations had an additional gender-transformative community mobilisation (CM) component, consisting of the formation of self-help groups, drop-in centres, formation of committees, strengthening of collective action, capacity building, mass events, advocacy and enabling environment.	Empirical, incremental economic costing Modelling of outcomes based on empirical condom use data Provider perspective Combined ingredients approach and top-down Sensitivity analyses conducted for costs	1) US\$ 312,942 2) US\$ 602,982	1) US\$ 19 per FSW reached at least once a year 2) US\$ 21 per FSW reached at least once a year 9 – 19% of the HIV prevention programme was spent on the community mobilisation component	30-50% less FSWs reported experience of violence [31]	<ul style="list-style-type: none"> Cost-effectiveness was not analysed for the violence outcomes Other outcomes included reduction in STI symptoms, increased consistent condom use, reduced HIV incidence (based on modelling)
Mass media edutainment for HIV/AIDS and GBV Muirhead et al, n.d.	South Africa Black and coloured adult population (ages 15-49)	The Soul City 4 th series was a multimedia edutainment programme producing television drama, radio drama and print materials serialised in 10 national newspapers and booklets around several themes, including HIV/AIDS and violence against women.	Empirical, full economic costing National-level modelling Provider perspective	US\$ 5,322,405	US\$ 0.16; \$0.01 and \$0.10 per person reached by television, radio and print US\$ 5.3 million per campaign (40% for VAW theme)	US\$ 9.24 per item adjusted change in action in VAW US\$ 154.16 per weighted effect on VAW-related action if campaign is jointly produced with HIV/AIDS theme	<ul style="list-style-type: none"> Unclear whether effective, as CE comparable to international standards 46% (television) and 34% (radio) of total cost is for VAW components
Health and psychosocial services for survivors of	South Africa 2 sites (public facility-based and	Both models of care provide health and psychosocial support, including a medico-legal examination, HIV testing and counselling, STD	Empirical (1), modelling at national level (2) Economic full and	US\$ 131,956- US\$ 225,029	1) US\$ 833 per survivor (\$ 488 - 1,169)	No violence prevention outcome	<ul style="list-style-type: none"> Not an economic evaluation with violence outcomes only HIV outcome

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Intervention, Study	Setting & Target population	Intervention description	Costing scope and methods	Total cost (2012US\$)	Unit cost (2012 US\$)	VAWG Effectiveness and Cost-effectiveness ratios (2012 US\$)	Interpretation and limitations
sexual assault Christofides et al, 2009	NGO community-based) Sexual assault survivors	treatment, comfort kit, post-exposure prophylaxis therapy for HIV negative survivors. The protocol includes follow-up monitoring visits for counselling, HIV and pregnancy testing and women are supported through the court process.	incremental costing Provider perspective Mixed bottom-up and top-down costing Includes patient-level, site and central-level costs		2) US\$409 (full) 3) US\$ 66 (incremental for PEP)		modelled through
Comprehensive post-rape services Kim et al, 2009	South Africa (rural) 1 public district hospital 409 rape survivors	Refentse model: five part intervention model, including the establishment of a sexual violence advisory committee, the formulation of a hospital rape management policy, a training workshop for service providers, designated examining room, and community awareness campaigns.	Empirical, incremental economic costing Provider perspective Mixed top-down (facility-level costs) and bottom-up (patient-level costs)	US\$ 87,319	1) US\$ 220 per case 2) US\$ 63.66 per case (excl. start-up development costs)	Not available	<ul style="list-style-type: none"> Not a cost-effectiveness study
Comprehensive post-rape services Kilonzo et al, 2009	Kenya 3 public health centres 784 rape survivors (43% were children <15 years)	The standard of care included clinical evaluation and documentation, clinical management, counselling and referral mechanisms. Targeted training that was knowledge-, skills- and values-based was provided to clinicians, laboratory personnel and trauma counsellors and coordination mechanisms established with the local police.	Modelled (over 1 year) Financial costing (excludes start-up capital costs) Provider perspective Top-down	Not available	US\$ 30.61 per survivor	Not available	<ul style="list-style-type: none"> Not a cost-effectiveness study Limitations: model excludes start-up and capital costs, no sensitivity analysis