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A community empowerment approach to the HIV response among sex workers: effectiveness, challenges, and considerations for implementation and scale-up

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Lancet 2015; 385: 172–85

Published Online
July 22, 2014

[http://dx.doi.org/10.1016/S0140-6736\(14\)60973-9](http://dx.doi.org/10.1016/S0140-6736(14)60973-9)

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A community empowerment-based response to HIV is a process by which sex workers take collective ownership of programmes to achieve the most effective HIV outcomes and address social and structural barriers to their overall health and human rights. Community empowerment has increasingly gained recognition as a key approach for addressing HIV in sex workers, with its focus on addressing the broad context within which the heightened risk for infection takes place in these individuals. However, large-scale implementation of community empowerment-based approaches has been scarce. We undertook a comprehensive review of community empowerment approaches for addressing HIV in sex workers. Within this effort, we did a systematic review and meta-analysis of the effectiveness of community empowerment in sex workers in low-income and middle-income countries. We found that community empowerment-based approaches to addressing HIV among sex workers were significantly associated with reductions in HIV and other sexually transmitted infections, and with increases in consistent condom use with all clients. Despite the promise of a community-empowerment approach, we identified formidable structural barriers to implementation and scale-up at various levels. These barriers include regressive international discourses and funding constraints; national laws criminalising sex work; and intersecting social stigmas, discrimination, and violence. The evidence base for community empowerment in sex workers needs to be strengthened and diversified, including its role in aiding access to, and uptake of, combination interventions for HIV prevention. Furthermore, social and political change are needed regarding the recognition of sex work as work, both globally and locally, to encourage increased support for community empowerment responses to HIV.

Key messages

- A community empowerment-based HIV response is a process by which sex workers take collective ownership of programmes and services to achieve the most effective HIV responses and address social and structural barriers to their health and human rights.
- Community empowerment-based HIV prevention interventions in sex workers are associated with significant reductions in HIV and STI outcomes and increases in consistent condom use with clients. However, evaluation designs have been weak and geographically restricted. Community empowerment approaches to combination HIV prevention in sex workers are rare and should be expanded and assessed.
- Despite the promise of community empowerment approaches to address HIV in sex workers, formidable structural barriers to implementation and scale-up exist at various levels. These barriers include regressive international discourses and funding constraints; national laws criminalising sex work; intersecting stigmas; and discrimination and violence such as that linked to occupation, gender, socioeconomic status, and HIV.
- Results underscore the need for social and political change regarding the manner in which sex work is understood and addressed, including the need to decriminalise sex work and recognise sex work as work. To help achieve these changes, support for networks and community organisations led by sex workers are needed both globally and locally.
- There is a need to continue to expand and strengthen the evidence base for community empowerment in sex workers, including study designs focused on better capturing and measurement of the process and the effect of empowerment efforts across diverse settings, and further investments in the generation of sex-worker-led, practice-based evidence.

Introduction

Since the beginning of the HIV epidemic, sex workers have been at a substantially increased risk for HIV infection. The disproportionate burden of disease in these individuals has been further emphasised with epidemiological data from several geographical settings and epidemic types.¹ Despite the global expansion of access to care and treatment, sex workers with HIV continue to face many barriers to access of services^{2–10} and have poor treatment outcomes.^{11,12} These findings show that sex workers are exposed to a unique set of factors impeding their health and necessitating increased attention within the global response to HIV.

The context of sex workers' heightened risk for HIV is characterised by various social and structural constraints.^{13–15} Sex work is criminalised in some form in 116 countries.¹⁶ In many settings, laws, policies, and local ordinances all serve to penalise and marginalise sex workers, and to exclude them from national HIV responses.¹⁷ Sex workers experience violations of their human and labour rights. They are also frequently exposed to intersecting social stigmas, discrimination, and violence related to their occupation, gender, socioeconomic position, and HIV status.^{1,15,18–21} Without addressing these powerful structural challenges, the HIV response in sex workers is likely to be ineffective and unsustainable.

A community empowerment-based response to HIV is a process by which sex workers take collective ownership of programmes to achieve the most effective HIV outcomes and address social and structural barriers to their health and human rights. These efforts are unique in that they are driven by the needs and priorities of sex workers themselves, coming together as a community. Community empowerment in sex workers has been recognised as a UNAIDS Best Practice for more than a decade,²² and continues to underpin key UN policy documents regarding HIV in sex workers.^{21,23} Assessments done across various countries have shown community empowerment to be a promising approach to reduce HIV risk in sex workers.²⁴ Results of mathematical modelling suggest that community empowerment efforts can significantly reduce HIV incidence in both sex workers and the general adult population across diverse HIV epidemic scenarios, and that these interventions are cost effective.^{1,25} Despite increasing encouraging evidence, government and donor investment in community empowerment-based approaches in sex workers has been low.^{26,27}

We undertook a comprehensive review of the implementation, effectiveness, and barriers and facilitators of community empowerment-based HIV prevention in sex workers. Within this review, we undertook a systematic review and meta-analysis of the effectiveness of community empowerment in sex workers for key HIV-related outcomes. Additionally, we present four case studies emphasising the social and structural challenges faced by sex workers across settings and their collective responses to reduce their risk for HIV infection and promote their overall health and human rights.

What is community empowerment?

Findings from our comprehensive review showed that community empowerment-based HIV responses differ from typical HIV prevention programming in several ways. First, community empowerment approaches do not merely consult sex workers, but rather are community-led, such that they are designed, implemented, and assessed by sex workers. Second, these approaches recognise sex work as work—ie, as a legitimate occupation or livelihood—and seek to promote and protect its legal status as such. Third, they do not aim to rehabilitate, rescue, or remove sex workers from their profession; instead, they are committed to ensuring the health and human rights of these individuals as workers and as human beings. Rather than classification of sex work as sexual violence, conflation of sex work with human trafficking, or framing of sex workers as victims or vectors of disease, a community empowerment response to HIV is based on sex workers' experiences, insights, and leadership.^{21,28}

In practical terms, the process of community empowerment often begins with sex workers meeting in a safe space to share their experiences, prioritise shared needs,

and problem solve to jointly address barriers to their health and wellbeing, including, but not limited to, their heightened risk for HIV. Community empowerment is a social movement in which sex workers come together as a community to develop internal cohesion, then mobilise their collective power and resources to articulate, and as necessary demand, their human rights and entitlements. In this process, sex-worker communities seek allies, including governmental and non-governmental groups, and challenge groups and individuals who inhibit progress to achieve social and policy change and expand access to quality HIV services. Formation of an organisation for sex-worker rights is often the outgrowth of a community empowerment process whose shape, speed, and focus varies by the sociopolitical, historical, and legal environment in which it takes place.

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See Online for appendix

Search strategy and selection criteria

Working collaboratively as researchers and members of the sex-worker community, we did a comprehensive search of the peer-reviewed and practice-based evidence of community empowerment-based responses to HIV in sex workers. For practice-based evidence, we searched online for, and solicited programme reports and presentations from, various organisations working on sex work and HIV prevention, including the Global Network of Sex Work Projects (NSWP) listserv. For peer-reviewed literature, we searched PubMed, PsycINFO, Sociological Abstracts, Embase, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL) with a combination of terms for sex work, HIV, sexually transmitted infections (STIs), and community empowerment (including “social cohesion”, “mobilisation”, “solidarity”, “collective”, and “rights”). Additionally, we reviewed a WHO database of articles about sex work and HIV, screened reference lists of included articles, and contacted experts to identify additional articles. Searches focused on literature in all languages published between Jan 1, 2003, and Feb 1, 2013. To examine the barriers and facilitators of community empowerment initiatives, we abstracted and compiled data obtained from both the peer-reviewed and practice-based literature, using a-priori and emergent categories at the global, state, and community level of analysis. We also synthesised literature about measurement and monitoring of a community empowerment.

To assess the evidence of effectiveness of community empowerment interventions, we updated a systematic review and meta-analysis of pre or post or multi-group assessments of community empowerment-based HIV prevention interventions in sex workers in low-income and middle-income countries. Key outcomes of interest included HIV infection, STI infection, and condom use with clients. Data were extracted in duplicate with standardised forms. We used random-effects models to meta-analyse data across studies and assessed heterogeneity with the I^2 statistic. We excluded duplicative data (data from the same participants reported in more than one article) from meta-analysis. The appendix provides further details of the methods used in the search strategy, systematic review, and meta-analysis.

We developed case studies for four sex-worker-led projects from Kenya, Burma, India, and Brazil. Authors involved in each of these programmes drew on project documents, conferred with community members, and considered on their experiences over time. In the case of Kenya (PM) and Burma (KTW), the case studies were developed by sex workers themselves, whereas the case studies from India (SRP) and Brazil (DK) are from the perspective of collaborating academic partners engaged in research in those settings. Two of these case studies describe in detail projects that were included in the systematic review and meta-analysis, in the case of India with the Avahan project, which represented 13 of 22 articles in the review, and the Encontros and Fio da Alma projects from Brazil, which represented two of 22 articles.

	Country	Population	Study design	Outcomes	Sample size	Sampling
Sonagachi Project						
Basu et al, 2004	India	Female sex workers	Group randomised trial	Condom use with all clients	N=200 (100 per study group)	Random selection of participants
Gangopadhyay et al, 2005	India	Female sex workers	Cross-sectional study	Gonorrhoea; chlamydia	N=342 (173 intervention, 169 control group)	Involved a mix of random and non-random selection of participants
Belgaum Integrated Rural Development Society (BIRDS)						
Halli et al, 2006	India	Female sex workers	Cross-sectional study	Condom use with all clients	N=1512	Random selection of participants
Frontiers Prevention Project (FPP)						
Gutierrez et al, 2010	India	Female sex workers	Serial cross-sectional study	Condom use with all clients	N=3442 (round 1), N=2147 (round 2)	Non-random selection of participants
Avahan						
Adhikary et al, 2012	India	Female sex workers	Serial cross-sectional study	HIV; high-titre syphilis; chlamydia; gonorrhoea; condom use with all clients, regular clients, and new clients	N=7828 (round 1), N=7806 (round 2)	Random selection of participants
Blanchard et al, 2013	India	Female sex workers	Cross-sectional study	Condom use with regular clients	N=1750	Random selection of participants
Blankenship et al, 2008	India	Female sex workers	Cross-sectional study	Condom use with all clients, regular clients, and new clients	N=812	Non-random selection of participants (respondent-driven sampling)
Boily et al, 2013	India	Female sex workers	Serial cross-sectional study	HIV; chlamydia; gonorrhoea	N=2284 (round 1), N=2378 (round 2), N=2359 (round 3)	Random selection of participants
Deering et al, 2011	India	Female sex workers	Cross-sectional study	Condom use with regular clients and new clients	N=775	Random selection of participants
Erausquin et al, 2012	India	Female sex workers	Serial cross-sectional study	Condom use with all clients	N=794 (round 1), N=669 (round 2), N=813 (round 3)	Random selection of participants
Guha et al, 2012	India	Female sex workers	Cross-sectional study	Condom use with all clients	N=9111	Random selection of participants
Mainkar et al, 2011	India	Female sex workers	Serial cross-sectional study	HIV; high-titre syphilis; chlamydia; gonorrhoea; condom use with all clients, regular clients, and new clients	N=2525 (round 1), N=2525 (round 2)	Random selection of participants
Rachakulla et al, 2011	India	Female sex workers	Serial cross-sectional study	HIV; condom use with all clients, regular clients, and new clients	N=3271 (round 1), N=3225 (round 2)	Random selection of participants
Ramakrishnan et al, 2010	India	Female sex workers	Cross-sectional study	Condom use with regular clients and new clients	N=9667	Random selection of participants
Ramesh et al, 2010	India	Female sex workers	Serial cross-sectional study	HIV; high-titre syphilis; chlamydia; gonorrhoea; condom use with all clients, regular clients, and new clients	N=2312 (round 1), N=2400 (round 2)	Random selection of participants (conventional cluster and time-location cluster sampling)
Reza-Paul et al, 2008	India	Female sex workers	Serial cross-sectional study	HIV; high-titre syphilis; chlamydia; gonorrhoea; condom use with all clients, regular clients, and new clients	N=429 (round 1), N=425 (round 2)	Random selection of participants (time-location cluster sampling)
Thilakavathi et al, 2011	India	Female sex workers	Serial cross-sectional study	HIV; high-titre syphilis; chlamydia; gonorrhoea; condom use with all clients, regular clients, and new clients	N=2032 (round 1), N=2006 (round 2)	Random selection of participants
Encontros						
Lippman et al, 2012	Brazil	Female, male, and transvestite sex workers	Prospective cohort study	Chlamydia; gonorrhoea; condom use with regular clients and new clients	N=420	Non-random selection of participants

(Table continues on next page)

	Country	Population	Study design	Outcomes	Sample size	Sampling
(Continued from previous page)						
Lippman et al, 2010	Brazil	Female, male, and transvestite sex workers	Prospective cohort study	Chlamydia; gonorrhoea	N=420	Non-random selection of participants
Fio da Alma						
Kerrigan et al, 2008	Brazil	Female sex workers	Serial cross-sectional study	Condom use with all clients	N=499 (round 1), N=537 (round 2)	Non-random selection of participants
Projeto Princesinha						
Benzaken et al, 2007	Brazil	Female sex workers	Serial cross-sectional study	Condom use with all clients	N=148 (round 1); N=139 (round 2)	Non-random selection of participants
Compromiso Colectivo						
Kerrigan et al, 2006	Dominican Republic	Female sex workers	Serial cross-sectional study	Chlamydia; gonorrhoea; condom use with new clients	Santo Domingo: N=210 (round 1), N=206 (round 2) Puerto Plata: N=200 (round 1), N=200 (round 2)	Random selection of participants

Table: Description of the studies (N=22) included in the systematic review of community empowerment approaches to address HIV among sex workers

Community empowerment in sex workers is thus an overall approach, rather than a set of specific intervention activities. Within the approach, various HIV prevention, treatment, and care and support strategies can be implemented. Specific intervention elements might include biomedical components (eg, counselling and testing for HIV and sexually transmitted infections [STIs], and linkages to care and treatment), behavioural components (eg, sex-worker-led outreach and community education, condom distribution), and structural components (eg, social cohesion and community mobilisation, access to justice, socioeconomic opportunities).²⁹

Is community empowerment effective?

Systematic review

Our systematic review identified 5457 unique citations, of which 22 peer-reviewed articles met the inclusion criteria for having assessed the effectiveness of community empowerment-based interventions for HIV prevention in sex workers over the past 10 years, from Feb 1, 2003, to Jan 31, 2013 (table).³⁰⁻⁵¹ The number of included publications more than doubled since our previous review (n=10), which included articles published between Jan 1, 1990, and Oct 15, 2010, mostly because of recent publications from the Avahan project in India. The 22 articles included in our present systematic review represented 30 325 sex-worker study participants from eight projects across three countries: India (17 articles), Brazil (four articles), and the Dominican Republic (one article; table). 13 of the 22 articles were from the Avahan project in India. Although all projects included female sex workers, only one project from Brazil also included male and transgender sex workers.^{33,40} Most studies included both establishment-based and non-establishment-based sex workers.

Most studies incorporated or intensified community empowerment within existing programmes. The existing

programmes all included traditional HIV prevention activities, including community-led peer education, condom distribution, and the promotion of periodic STI screening. The additional effect of community empowerment was subsequently assessed, above and beyond these traditional HIV prevention approaches, either by measurement of changes in outcomes over time as a community empowerment approach was added or intensified, or by comparison of varying levels of exposure to empowerment activities. However, the included programmes did vary in the specific nature of their activities, and in the extent to which they fully operationalised the ideals and principles of community empowerment, including ownership and project design and management by groups led by sex workers.

One randomised controlled trial³⁴ done in West Bengal, India, had a high or uncertain risk of bias across all quality assessment items listed by the Cochrane Collaboration. With the exception of one longitudinal study from Brazil,^{33,40} the remaining studies all used cross-sectional or serial cross-sectional designs. Because the evidence base indicates fairly weak study designs, our ability to draw causal inferences and firmly establish the effectiveness of community empowerment is restricted.

Meta-analysis

In our meta-analysis, community-empowerment-based responses to HIV in sex workers were consistently associated with significant reductions in HIV and STIs, and increases in condom use.

HIV infection was measured in five articles.^{41,43,45,46,48} All articles were serial cross-sectional studies from the Avahan project in India, and all measured HIV prevalence, but not incidence. Findings from these studies showed a combined reduction in HIV prevalence in sex workers after the implementation of community empowerment

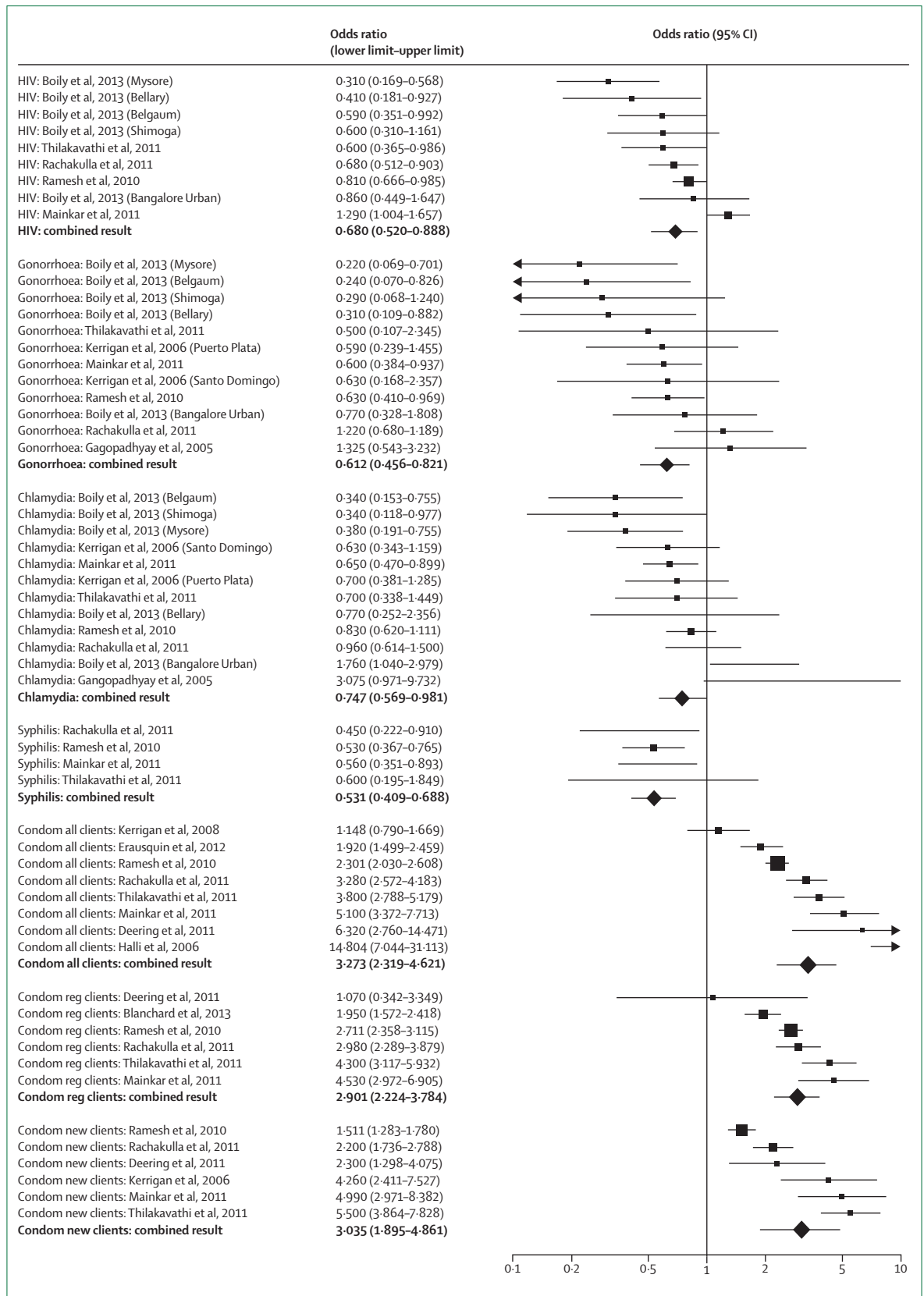


Figure 1: Forest plot of the studies included in the meta-analysis of community empowerment approaches to address HIV among sex workers

efforts (OR 0.680, 95% CI 0.520–0.888 [figure 1]; $p=0.0047$). Heterogeneity was high ($I^2=73.897$).

STI incidence was measured in one longitudinal study done in Brazil.^{33,40} Although 55% of participants were lost to follow-up by study end, inverse probability weighting was used to minimise potential biases. The study showed a non-significant reduction in combined gonorrhoea and chlamydia prevalence from baseline to 12-month follow-up (crude odds ratio [OR] 0.46, 95% CI 0.2–1.3).³³ Eight additional cross-sectional or serial cross-sectional articles^{36,38,41,43,45,46,48,52} were included in meta-analyses for STI infection. Combined results showed that community empowerment was associated with a significantly decreased odds of gonorrhoea (figure 1; seven studies; $p=0.011$), chlamydia (figure 1; seven studies; $p=0.036$), and high-titre syphilis (four studies; $p<0.0001$). Heterogeneity was high for meta-analyses of gonorrhoea ($I^2=32.511$) and chlamydia ($I^2=61.045$), but not for syphilis ($I^2=0$), which also showed the strongest effect (the odds of syphilis were reduced by almost half with a community empowerment approach).

Condom use was measured in the one included randomised trial.³⁴ This study, which was done in India, randomised two clusters: one to community empowerment and one to control. The regression coefficient β of 0.3447 ($p=0.002$) showed a significant improvement in condom use with clients over time in intervention participants compared with control participants. Condom use was also measured in the longitudinal study from Brazil.³³ This study showed significant increases in consistent condom use in the past 30 days with regular clients (OR 1.9, 95% CI 1.1–3.3), but not with new clients (1.6, 0.9–2.8) when condom use was already high. We included eight additional cross-sectional or serial cross-sectional articles^{31,37,39,41,43,45–47} in meta-analyses for condom use. Combined results showed that community empowerment was associated with significantly heightened odds of consistent condom use with new clients (figure 1; six studies; $p<0.0001$), regular clients (figure 1; six studies; $p<0.0001$), and all clients (figure 1; eight studies; $p<0.0001$); heterogeneity was high for all condom use meta-analyses ($I^2=91.767$ vs $I^2=80.480$ vs $I^2=90.353$).

How is community empowerment measured?

To date, most efforts to measure community empowerment have focused on the specific intervention activities undertaken, whereas less focus has been placed on the measurement of community empowerment as a social process. For example, most articles in our systematic review measured intervention exposure by assessment of whether participants had been contacted by a peer educator; had received condoms or other educational materials; had visited drop-in centres or health clinics; or had participated in group workshops, meetings, or other activities. Similarly, programme monitoring indicators reported in the 22 articles in the systematic

review generally focused on the coverage and quality of clinical and community-based HIV services offered to sex workers, rather than documentation of the community empowerment process. However, the Avahan project implemented a more comprehensive monitoring plan of its community mobilisation programmes, including those with sex workers. The Community Ownership and Preparedness Index (COPI) was designed to document the progress of community mobilisation and the transition of responsibility to participating community groups, including sex-worker organisations.^{53,54} The parameters of the COPI include leadership, governance, decision making, resource mobilisation, networking, programme management, engagement with the state to secure rights and entitlements, and engagement with the wider society to reduce sex-work-related stigma.⁵⁴

Some projects attempted to document the social process associated with community empowerment among sex workers with use of both individual indicators and aggregate measures. Of the 22 articles in our systematic review, two^{32,35} used single-item indicators to capture the social process stimulated by the community empowerment intervention, including constructs such as “collective efficacy” or “collective action”. Five^{33,37–39,49} of the 22 studies used more theoretically complex aggregate measures to assess the dynamic process of community empowerment, from the formation of internal community cohesion within the sex-worker community to the social and political participation of sex workers as a group, and, as a result, their broader social inclusion in society, including their access to health, social, and economic resources. Additionally, some projects documented the progression of sex-worker collectivisation and participation in sex-worker-led organisations.^{37,39} Finally,



Figure 2: Challenges to the implementation and scale-up of community empowerment, and sex-worker-led responses to structural barriers at the global, state, and community levels

in addition to development of collective resources and “power over” increased personal agency and “power within” have been included as important measures of the process of community empowerment.⁴⁹

What are the barriers and facilitators to community empowerment?

Our comprehensive review identified 110 documents from both the peer-reviewed and practice-based evidence related to implementation of community-empowerment-based responses to HIV in sex workers across various settings. From this literature, we sought to identify the most salient barriers to implementation and scale-up at the global, state, and community levels (figure 2). Additionally, we sought to capture facilitating factors and innovative responses used by sex-worker programmes to overcome these challenges.

At the global level, international policies and funding mechanisms can help or hinder community empowerment. Policies that hinder the community empowerment process include the global raid-and-rescue discourse, in which non-sex workers characterise sex workers as passive victims needing rescue.^{21,55,56} These programmes often deny sex workers’ support in choosing their livelihoods and undermine the legitimacy of sex work as work. Additionally, this discourse often conflates consensual adult sex work with human trafficking. The US Government’s anti-prostitution pledge also hindered community empowerment processes by stipulating that organisations receiving money from the US President’s Emergency Plan for AIDs Relief should sign a pledge against prostitution. Reports suggested that the pledge harmed sex workers and promoted stigma and discrimination⁵⁷ while reducing the effectiveness of HIV prevention programmes and services for sex workers.⁵⁸ The pledge was ruled unconstitutional by the US Supreme Court in June, 2013. Although some international donors do advocate for community empowerment, they often still hold programmes accountable to management requirements that are difficult for members of or groups in the sex-worker community to maintain, thus restricting sex workers’ actual authority and decision-making power in development, implementation, and assessment of programmes.⁵⁹

Factors also exist that aid community empowerment at the global level. For example, the Global Network of Sex Work Projects (NSWP) unites 160 sex-worker groups from 60 countries and stimulates dialogue and debate related to international policies and funding practices that affect the health and human rights of sex workers. Building on the recommendations of the recent report from the Global Commission on HIV and the Law,⁶⁰ NSWP’s consensus statement calls for the full decriminalisation of sex work to promote and protect the human rights of sex workers, including reducing their increased risk for HIV.⁶¹ In just the past few years, several UN agencies and other international organisations have

called for decriminalisation of sex work as an integral part of the HIV response for sex workers.^{21,29,62–64}

At the national level, the state strongly influences the health and human rights of sex workers and their ability to implement community empowerment approaches. National laws criminalising sex work or activities related to sex work can impede sex workers’ ability to organise and increase stigma, discrimination, and violence in sex workers.^{16,65} Efforts to decriminalise sex work are active in many countries and some important successes have taken place in the area of national laws and policies related to sex work. For example in Brazil, the sex workers’ rights movement worked to secure sex work as a recognised occupation and sex workers are now legally entitled to claim crucial labour rights, such as pensions.⁶⁶ Initiatives to involve the police in sensitivity trainings have also been successful.^{67,68} For example in India, because of police violence, sex workers from Ashodaya Samithi organised trainings for local law enforcement, which culminated in police officers joining sex workers in solidarity at a rally to protest a law detrimental to sex workers.⁶⁷ The Avahan project created crisis intervention teams that began policing the police by having sex workers report and document police abuses, leading to decreased violence.⁶⁹ Furthermore, sex workers have turned policies and injustices that hinder empowerment into reasons for community mobilisation that aid empowerment.^{70–72} For example, the murder of a transgender sex worker in Brazil led to a public demonstration to address sex-work-related violence, which was an important initial step in the development of group-level consciousness for further collective action to address health and human rights.⁷¹

At the community level, sex workers are frequently exposed to stigma, discrimination, and violence—often by law-enforcement officials, owners and managers, and sometimes by clients.^{67,68,73–76} They are also victims of socioeconomic exclusion;^{76,77} denial of health care;^{68,76,78,79} stigmatisation and discrimination by friends, family, neighbours, and social and religious institutions;^{71,74,80} and have difficulty accessing social entitlements.^{56,78,79} For these reasons, many individuals who practise sex work do so in secret and are unwilling to be recognised as sex workers.^{81–83} This stigma-fuelled denial of selling sex hampers community empowerment by the discouragement of some individuals from joining organisations that openly focus on sex workers. In places where sex work is illegal, sex workers might also avoid sex-work organisations for fear of police reprisal.⁸⁴

Sex workers are diverse.⁸⁵ They come from different socioeconomic, ethnic, and regional backgrounds. They are often mobile or undocumented migrants and they work in different venues and spaces, including brothels, bars, or on the street.^{28,86,87} Furthermore, social stratification is an issue among sex workers, as is competition for clients^{28,88} all of which can lead to

For more on the NSWP see <http://www.nswp.org>

mistrust and disunity,⁸⁹ hampering community empowerment efforts. Identification of common interests is a necessary but insufficient part of building social cohesion and creating collective action.⁸⁶ The Sonagachi Project and the Sampada Gramin Mahila Sanstha/Veshya Anyay Mukti Parishad (SANGRAM/VAMP) initiative noted that community-led outreach and peer educators helped sex workers to identify shared experiences and needs, and aided community building.^{28,90,91} In the Ashodaya Simithi project in Mysore, India, sex workers built cohesion when they openly began identifying as sex workers and mobilising around the idea that sex work is legitimate.⁹² Many projects build infrastructure, often in the form of drop-in centres that give sex workers physical space allowing them to come together and form bonds.^{39,88,93-95}

In addition to building of social cohesion among sex workers, forging of relationships with potential allies and partners is crucial, especially because the stigma, discrimination, and disempowering circumstances faced by sex workers are driven by outside groups.⁸¹ Some initiatives have had great success working with powerful actors, such as brothel owners and managers, and influential local clubs and political groups,⁹⁶ whereas others have found it more difficult, noting that outside groups have little incentive to join initiatives aimed at empowerment of sex workers.⁸⁸ Promotion of social acceptance of sex workers by involvement of members of the larger community in sex-worker events, rallies, and other social mobilisation activities has also been linked to aiding community empowerment.²⁸

Across these different levels, development of an enabling environment for sex workers is key to facilitation of community empowerment. Such development involves giving voice to individuals affected by unequal social conditions and fostering the ability to challenge such conditions.⁹⁷ Therefore, building of leadership and capacity among sex workers within community empowerment interventions is crucial. For example, the Sonagachi Project fostered capacity building by promoting a sense of equality between sex workers and project staff and adapting the project to serve the needs and priorities identified by sex workers themselves.²⁸ Ashodaya Samithi fostered leadership by allowing sex workers to make key decisions in the creation of a health centre to serve their needs.⁹⁸ Groups can also promote autonomy and leadership by networking with other sex-worker groups regionally, nationally, or internationally, and by linking with other movements, such as labour rights, women's rights, and human rights.⁹⁹ Although organisations led by non-sex workers, such as international non-governmental organisations (NGOs), can have important roles in community empowerment initiatives, particularly in the initial stages of community organising, some suggest their role should be supportive in nature, rather than directive, or else they too could inhibit the community empowerment process.¹⁰⁰ Together, this literature suggests

that the community empowerment process should be envisioned, shaped, and led by sex workers themselves if it is to be effective and sustainable in reducing sex workers' risk for HIV and promoting and protecting their health and human rights.

Case studies

The four case studies presented below, from Kenya, Burma, India, and Brazil, describe key elements of the context, process, barriers and facilitators, and sustainability of community empowerment.

Kenya: "Now, some police have not bothered messing with the girls because they have their mother in Nairobi"

In bars outside Nairobi, Kenya, sex workers experienced persistent violence and HIV risk, yet the stigma surrounding HIV meant that sex workers rarely discussed HIV and were often ignorant of even the most basic facts about HIV transmission. The Bar Hostess Empowerment and Support Programme (BHESP) was founded in 2001, when a small group of bar hostesses and sex workers were organised and trained in HIV prevention and care. BHESP now has more than 3000 members with a network of 42 different local groups across four provinces in Kenya. Each of the local groups is independently formed and is unique in terms of location and client type.

BHESP activities include drop-in centres for health education and other HIV and STI services, community-led educators, care and support for sex workers with HIV, and opportunities for the mobilisation and capacity building of sex workers. Although BHESP's initial focus was HIV, the women considered violence, sometimes murder, by police, managers, and some bar customers and clients of sex workers as a bigger and more immediate issue; to them, HIV was less of an immediate threat on a daily basis. BHESP confronts these abuses by going directly to the police and to the courts, by advocating against police brutality in public, and through mass media. Sex workers have now been trained as paralegals to educate their peers about their rights. Women are often arrested for loitering, carrying condoms, or dressing as if they had an "immoral purpose" regarding intent to sell sex.

Before establishment of the BHESP, women would often bribe the police or plead guilty and pay a fine. Now, the BHESP paralegals advise women to plead innocence and to take the case to court. Between January and June, 2013, 105 cases of violence and arbitrary arrest of sex workers were reported to BHESP. With the help of lawyers, BHESP won all these cases, which eventually went before the court.

Additionally, BHESP advocates for decriminalisation of sex work at the local level, city by city. BHESP monitors the number of cases of abuse and arrests that are reported through their hotline, whether cases go to court, and whether arrests have stopped or decreased as

For more on the Bar Hostess Empowerment and Support Programme see <http://www.bhesp.org>

a result of BHESP's interventions. These active community empowerment interventions have resulted in decreases in police harassment of sex workers; police realise their actions are likely to result in an unnecessary confrontation with BHESP and possibly being taken to court.

Burma: "I came from the community, so I work for the community"

In 2004, some HIV programmes existed in Burma but none specifically for sex workers, despite high HIV prevalence in these individuals, including those who had worked in Thailand. The sex-worker community faced much stigma and dialogue about their health and rights was scarce. The Targeted Outreach Project (TOP) was started in Burma's capital city, Yangon, and has now been implemented in 18 cities, reaching more than 62 000 sex workers per year. In Yangon, TOP established drop-in centres where sex workers could access free health care, without the stigma they often encountered from other health-care providers. The care, support, and other services provided at the centres are a holistic package, not solely focused on HIV or STIs. Importantly, community educators are sex workers from the communities that they serve. After establishment of the early drop-in-centres, TOP became more sophisticated and developed an approach that was inclusive of sex workers, the neighbouring community, the health department, and local authorities, engaging all partners from the outset. TOP had to overcome local opposition in some neighbourhoods to the establishment of drop-in-centres. In understanding of the stigma attached to sex work, TOP put on theatrical performances depicting the lives of sex workers to win over the neighbours.

TOP provides the technical and financial support needed to open new centres, but insists that local sex workers take responsibility and control over their own centres through empowerment, advocacy, and emotional support. TOP monitors the performance of centres, and does so in a way that is easy and accessible to sex workers. For example, for the monitoring of condom use by sex workers with clients at last sex, TOP has instituted a simple system using a coupon box with three different colours of coupons from which to choose. Red signifies no condom use during last sex, green means a condom was used, and yellow represents non-penetrative sex during last sexual encounter. When sex workers attend for any centre services, they choose the appropriate coupon colour and place it in the box. Coupons are then counted at the end of the month to establish the proportion of individuals using condoms. TOP continues to work towards their main goals: freedom from the stigma and violence sex workers consistently face, and affordable and accessible health services. The TOP programme recognises that sex workers will have different levels of interest in engaging in the

programmes. However, they contend that all sex workers should be given the opportunity to actively participate in all levels of decision making.

India: from "for the community", to "with the community", to "by the community"

In 2004, researchers from the University of Manitoba did an assessment in sex workers in Karnataka, India, which emphasised the need for safe space, violence reduction, and basic health services. Credibility within the community was gained by development of a 12-week plan to rollout services. This initial phase involved a "for the community" approach driven by external agents. Soon, it was clear that the project needed to work "with the community", involving sex workers in all aspects of the project, including decision making. This phase saw a high degree of community mobilisation in sex workers, including them assembling for public events and celebrations. Within 1 year of the assessment, an organisation of sex workers, Ashodaya Samithi (Dawn of Hope), was born with a democratically elected executive board. In the move from "us" researchers as external agents doing something for "them", to researchers and the community working together, it became evident over time that the organisation of sex workers was ready to move to the next level of making changes by themselves or "by the community". In its second year, Ashodaya was able to take on most of the core elements of the project. Within 3 years, more than 4000 sex workers had become members, monitoring showed a saturation in intervention coverage, and Integrated Biological and Behaviour Assessments (IBBA) showed progress in HIV outcomes, such as increased condom use and decreased STIs. The university group was not only playing a facilitator role but was bringing science to sex workers and deconstructing it in such a way that they were able to use it. Capture-recapture size estimation allowed the community to see that they had strength in numbers and that together they could form a constituency. The IBBA helped them understand that HIV is real, that there were sex workers among them who were HIV infected, and that protection is vital. Sex workers not only owned the data generated, but owned the response. By 2007, Ashodaya had started organised dissemination of its model through a community-to-community learning programme to help strengthen other sex-worker organisations. The programme offers technical assistance to various sex-worker groups and organisations as a national learning site. Soon it became a regional learning site, maturing into the Ashodaya Academy, which now offers technical assistance to sex-worker organisations in the Asia-Pacific region. Currently, through the European Commission, Ashodaya has been entrusted to build capacities for sex-worker projects in several countries in sub-Saharan Africa. Furthermore, NSWP has recognised the work of

For more on Ashodaya Samithi see <http://www.ashodaya.org>

the Ashodaya Academy along with VAMP to provide assistance in development of the pan-Africa sex workers' academy. Today Ashodaya Samithi has more than 8000 members; it has a programme management unit that makes key decisions about programme delivery and a governing board comprised of community leaders. The community now runs all programmes and has an annual budget of more than US\$2 million.

Brazil: "without shame, you have an occupation"

Davida, a sex-worker-led NGO, was established in 1992, in Rio de Janeiro, Brazil. The organisation was founded to promote the health of sex workers and their rights as citizens, to reduce stigma and violence, and to ensure an active role for sex workers in the creation of public policies. Davida, along with the Brazilian Network of Prostitutes founded in 1987, give voice and visibility to sex workers' needs and priorities, including, but not limited to, HIV prevention. Their approach to health and rights promotion has always been focused on creation of political, social, and cultural change regarding the manner in which sex work was understood and regulated in Brazil. Through advocacy and grass-roots organising, the efforts of the national network led to important policy changes at the federal level. In 2002, sex work was officially recognised as an occupation in the Ministry of Labour's Occupational Registry, entitling sex workers to social security and other workers benefits. Although the continued illegality of the premises where sex work takes place has made guaranteeing of full labour rights difficult, substantial progress has been made. Davida's work also expanded in the sociocultural and media realms. Throughout the 1990s and early 2000s, Davida partnered with the Brazilian Ministry of Health on groundbreaking HIV prevention campaigns centred around encouragement of respect for the profession and fighting of stigma, such as the Maria Sem Vergonha ("Maria, without shame: you have an occupation) public media campaign. In 2005, the organisation created its own fashion and clothing line called Daspu ("of the whores") that received wide national and international recognition. However, in the past 5 years, national and international support (political and financial) has greatly decreased for the Brazilian sex-worker rights and community empowerment movement, and in turn, its actions have become more restricted in scope. In June, 2013, great controversy emerged in Brazil regarding human rights and HIV prevention in sex workers. The Brazilian Minister of Health vetoed, and then later drastically changed, a rights-based anti-stigma HIV prevention campaign created in partnership between sex workers and the sexually transmitted disease [STD]/AIDS and viral hepatitis department of the Ministry of Health. First, the Minister removed the most controversial poster, which stated, "I am happy being a sex worker (Eu sou feliz sendo prostituta)". After additional political

pressure, he vetoed the entire campaign, fired the Director of the STD/AIDS department and launched a drastically changed version of the campaign focused exclusively on condom use and devoid of any mention of citizenship or rights. Several members of the STD/AIDS department resigned, while the Prostitutes Network and other civil society groups and researchers organised large-scale mobilisations and letters of protest in response to the government's actions. These challenges signal the crucial importance of sustaining a community empowerment movement among sex workers with both national and international political and financial resources and ongoing collaborative partnerships.

For more on Davida see
<http://www.beijodarua.com.br>

What are the policy, programme, and research implications?

Our findings show the promise of community empowerment approaches in responding to the significantly increased risk of HIV infection in sex workers. However, results should be interpreted with caution because of the fairly weak research designs and low geographical variation of the studies in our nested meta-analysis. The heterogeneity recorded in the effects of community empowerment on specific HIV outcomes is expected in view of the nature of the approach. However, this heterogeneity further signals the appropriateness of an emphasis on the consistent trends noted regarding the effectiveness of community empowerment, rather than the degree of expected effect across settings.

Future studies are needed to more rigorously measure the effect of community empowerment approaches to HIV in sex workers across geographical and epidemic settings on both HIV and non-HIV outcomes. In particular, investigators need to assess the effect and process of community empowerment as a platform for combination HIV prevention interventions that integrate biomedical, behavioural, and structural elements. In settings such as sub-Saharan Africa, where the burden of HIV in sex workers is extremely high, opportunities might exist for cluster randomised controlled trials to establish with greater confidence the effects of community empowerment approaches in sex workers on HIV incidence. However, randomised controlled trials are by no means the only type of rigorous research needed moving forward.

Measurement of the community empowerment process needs to be improved with use of reliable aggregate measures that can be validated across settings. Such measures would assist in further documenting the complex social process of community empowerment and the various pathways through which it could lead to social and structural change. Qualitative and ethnographic research should also accompany the implementation of community empowerment approaches in sex workers to understand context-specific opportunities and challenges to implementation. Furthermore, the practice-based evidence generated by groups led by sex workers needs to be expanded.

Barriers remain in relation to the broad implementation of community empowerment-based responses to HIV. Our findings show that sex work is not yet widely understood as work or a legitimate occupation, and that sex workers continue to be portrayed as individuals who have made poor moral choices or who have been exploited. Whereas advances in thinking regarding the legitimacy of other marginalised populations, such as men who have sex with men and drug users, have taken place in recent years, the ability to reframe and create a new dialogue for sex work has encountered many challenges. Such difficulties might be partly due to the double standard faced by sex workers, who are often women, and who are considered to be in violation of various moral principles in terms of gender and sexuality norms. Divergent perspectives within the women's movement on the issue of sex work have also played an important part in restriction of the ability of the sex workers' rights movement to gain momentum on this issue, as have the few resources afforded to organisations and networks led by sex workers.¹⁰¹ Despite these barriers, sex-worker organisations have developed innovative and effective strategies to address the multi-level challenges they face in the implementation of community empowerment initiatives to promote their health and human rights. These efforts need increased financial and political support if they are to advance.

Community empowerment approaches in sex workers have had important successes tackling social and structural constraints to protective sexual behaviours and, as a result, reducing behavioural susceptibility to HIV in the context of sex work. New HIV prevention technologies and approaches, such as treatment as prevention, self-testing, pre-exposure prophylaxis, and microbicides are becoming increasingly available globally. As these efforts expand, they provide an important opportunity for governments, donors, and NGOs to establish meaningful partnerships with sex-worker communities and organisations, and to integrate these initiatives into ongoing community empowerment efforts as one aspect of a combination package of services for sex workers.

Conclusions

The available evidence, although based on studies from a small number of projects and countries, shows that community empowerment holds great promise as an effective approach for reducing HIV risk in sex workers and that scale-up of these initiatives could contribute to curbing of the epidemic in sex workers and the general population.^{1,24,25} Our findings emphasise the deep-rooted paradigmatic challenges associated with expansion of community empowerment-based responses to HIV in sex workers. Increased support is needed from donors, governments, partner organisations, and other allies to enable sex-worker groups to effectively and sustainably overcome barriers to implementation and scale-up of a community empowerment approach.

Contributors

All authors participated in the conceptualisation, development, and writing of the manuscript. DK led conceptualisation of paper, design of analysis, and overall write up. CK led the systematic review and meta-analysis, tables and write-up. RM-T provided community-focused framing and feedback on all aspects of manuscript development. SR-P, KTW, and PW led the case studies on India, Burma, and Kenya, respectively. AM did searches for effectiveness, cost-effectiveness, and measurement, and led the associated write up. VF did searches for barriers and facilitators to implementation and scale-up and led the associated write up. AM and VAF extracted data for systematic review articles. JB was the senior author providing technical and conceptual feedback on all aspects of the manuscript particularly framing, language, sociopolitical context of findings and their implications. All authors reviewed and approved the final manuscript.

Declaration of interests

We declare no competing interests.

Acknowledgments

We thank all the sex workers who led and participated in the research and programmatic efforts which form the basis for this analysis; Gina Dallabetta for her assistance clarifying information about data from the Avahan project; Andrea Blanchard, Kim Blankenship, and Mandar Mainkar for providing additional information about their articles included in the systematic review; and the experts and members of the Network of Sex Work Projects (NSWP) listserv who responded to our requests for relevant articles and reports; Laura Murray for her help developing the Brazil case study; and the editorial and technical team of The *Lancet* Series on HIV and sex workers and the peer reviewers for their helpful comments and suggestions. This report and The *Lancet* Series on HIV and sex workers was supported by grants to the Center for Public Health and Human Rights (Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA) from The Bill & Melinda Gates Foundation, The UN Population Fund, and the Johns Hopkins University Center for AIDS Research—a programme funded by National Institutes of Health (NIH; 1P30AI094189), which is supported by the following NIH co-funding and participating institutes and centres: National Institutes of Allergy and Infectious Diseases (NIAID), National Cancer Institute (NCI), National Institute for Child Health and Development (NICHD), National Heart, Lung, and Blood Institute (NHLBI), National Institute of Mental Health (NIMH), National Institute for Drug Abuse (NIDA), Fogarty International Center (FIC), and Office of AIDS Research (OAR). The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH.

References

- 1 Kerrigan D, Wirtz A, Baral S, et al. The global HIV epidemics among sex workers. Washington, DC: The World Bank, 2013.
- 2 Shannon K, Bright V, Duddy J, Tyndall MW. Access and utilization of HIV treatment and services among women sex workers in Vancouver's Downtown Eastside. *J Urban Health* 2005; **82**: 488–97.
- 3 Kennedy C, Barrington C, Donastorg Y, et al. Exploring the positive, health, dignity and prevention needs of female sex workers, men who have sex with men and transgender women in the Dominican Republic and Swaziland. Baltimore, MD: Project SEARCH: Research to Prevention, 2013.
- 4 Scorgie F, Nakato D, Harper E, et al. 'We are despised in the hospitals': sex workers' experiences of accessing health care in four African countries. *Cult Health Sex* 2013; **15**: 450–65.
- 5 Scambler G, Paoli F. Health work, female sex workers and HIV/AIDS: global and local dimensions of stigma and deviance as barriers to effective interventions. *Soc Sci Med* 2008; **66**: 1848–62.
- 6 Ghimire L, Teijlingen EV. Barriers to utilisation of sexual health services by female sex workers in Nepal. *Glob J Health Sci* 2009; **1**: 12–22.
- 7 Chakrapani V, Newman PA, Shunmugam M, Kurian AK, Dubrow R. Barriers to free antiretroviral treatment access for female sex workers in Chennai, India. *AIDS Patient Care STDS* 2009; **23**: 973–80.

- 8 Beyrer C, Baral S, Kerrigan D, El-Bassel N, Bekker LG, Celentano DD. Expanding the space: inclusion of most-at-risk populations in HIV prevention, treatment, and care services. *J Acquir Immune Defic Syndr* 2011; **57** (suppl 2): S96–99.
- 9 Beattie TS, Bhattacharjee P, Suresh M, Isac S, Ramesh BM, Moses S. Personal, interpersonal and structural challenges to accessing HIV testing, treatment and care services among female sex workers, men who have sex with men and transgenders in Karnataka state, South India. *J Epidemiol Community Health* 2012; **66** (suppl 2): ii42–48.
- 10 Mtetwa S, Busza J, Chidiya S, Mungofa S, Cowan F. “You are wasting our drugs”: health service barriers to HIV treatment for sex workers in Zimbabwe. *BMC Public Health* 2013; **13**: 698.
- 11 Diabaté S, Zannou DM, Geraldo N, et al. Antiretroviral therapy among HIV-1 infected female sex workers in Benin: a comparative study with patients from the general population. *World J AIDS* 2011; **1**: 94–99.
- 12 Huet C, Ouedraogo A, Konate I, et al. Long-term virological, immunological and mortality outcomes in a cohort of HIV-infected female sex workers treated with highly active antiretroviral therapy in Africa. *BMC Public Health* 2011; **11**: 700.
- 13 Lippman SA, Donini A, Diaz J, Chinaglia M, Reingold A, Kerrigan D. Social-environmental factors and protective sexual behavior among sex workers: the Encontros intervention in Brazil. *Am J Public Health* 2010; **100** (suppl 1): S216–23.
- 14 Park M, Yi H. HIV prevention support ties determine access to HIV testing among migrant female sex workers in Beijing, China. *Am J Epidemiol* 2011; **173**: S223.
- 15 Reed E, Gupta J, Biradavolu M, Devireddy V, Blankenship KM. The context of economic insecurity and its relation to violence and risk factors for HIV among female sex workers in Andhra Pradesh, India. *Public Health Rep* 2010; **125** (suppl 4): 81–89.
- 16 Ahmed A, Kaplan M, Symington A, Kismodi E. Criminalising consensual sexual behaviour in the context of HIV: consequences, evidence, and leadership. *Glob Public Health* 2011; **6** (suppl 3): S357–69.
- 17 Decker MR, Crago A-L, Chu SKH, et al. Human rights violations against sex workers: burden and effect on HIV. *Lancet* 2014; published online July 22. [http://dx.doi.org/10.1016/S0140-6736\(14\)60800-X](http://dx.doi.org/10.1016/S0140-6736(14)60800-X).
- 18 Beattie TS, Bhattacharjee P, Ramesh BM, et al. Violence against female sex workers in Karnataka state, south India: impact on health, and reductions in violence following an intervention program. *BMC Public Health* 2010; **10**: 476.
- 19 Decker MR, Wirtz AL, Baral SD, et al. Injection drug use, sexual risk, violence and STI/HIV among Moscow female sex workers. *Sex Transm Infect* 2012; **88**: 278–83.
- 20 Swain SN, Saggurti N, Battala M, Verma RK, Jain AK. Experience of violence and adverse reproductive health outcomes, HIV risks among mobile female sex workers in India. *BMC Public Health* 2011; **11**: 357.
- 21 UNAIDS. UNAIDS guidance note on HIV and sex work. Geneva, Switzerland: UNAIDS, 2012.
- 22 Jenkins C. Female sex worker HIV prevention projects: Lessons learnt from Papua New Guinea, India, and Bangladesh. Geneva, Switzerland: UNAIDS, 2000.
- 23 WHO, UNFPA, UNAIDS, NSWP. Prevention and Treatment of HIV and other sexually transmitted infections for sex workers in low-and middle-income countries: recommendations for a public health approach. Geneva, Switzerland: World Health Organization HIV/AIDS Programme, 2012.
- 24 Kerrigan DL, Fonner V, Stromdahl S, Kennedy CE. Community empowerment among female sex workers is an effective HIV prevention intervention: a systematic review of the peer-reviewed evidence from low and middle-income countries. *AIDS Behav* 2013; **17**: 1926–40.
- 25 Wirtz AL, Pretorius C, Beyrer C, et al. Epidemic impacts of a community empowerment intervention for HIV prevention among female sex workers in generalized and concentrated epidemics. *PLoS One* 2014; **9**: e88047.
- 26 Schwartlander B, Stover J, Hallett T, et al. Towards an improved investment approach for an effective response to HIV/AIDS. *Lancet* 2011; **377**: 2031–41.
- 27 Malaria TGFtFAta. Global Fund HIV investments specifically targeting most-at-risk populations: an analysis of round 8 (2008). Geneva, Switzerland: The Global Forum on MSM & HIV (MSMGF), 2011.
- 28 Bandyopadhyay N, Mahendra VS, Kerrigan D, Jana S, Saha MK. The role of community development approaches in ensuring the effectiveness and sustainability of interventions to reduce HIV transmission through commercial sex: case study of the Sonagachi Project, Kolkata, India. Washington, DC: Horizons/Population Council, 2004.
- 29 UNDP, UNAIDS. Understanding and acting on critical enablers and development synergies for strategic investments. New York, NY: UNDP, 2012.
- 30 Adhikary R, Gautam A, Lenka SR, et al. Decline in unprotected sex & sexually transmitted infections (STIs) among female sex workers from repeated behavioural & biological surveys in three southern States of India. *Indian J Med Res* 2012; **136** (suppl): 5–13.
- 31 Erasquin JT, Biradavolu M, Reed E, Burroway R, Blankenship KM. Trends in condom use among female sex workers in Andhra Pradesh, India: the impact of a community mobilisation intervention. *J Epidemiol Community Health* 2012; **66** (suppl 2): ii49–54.
- 32 Guha M, Baschieri A, Bharat S, et al. Risk reduction and perceived collective efficacy and community support among female sex workers in Tamil Nadu and Maharashtra, India: the importance of context. *J Epidemiol Community Health* 2012; **66** (suppl 2): ii55–61.
- 33 Lippman SA, Chinaglia M, Donini AA, Diaz J, Reingold A, Kerrigan DL. Findings From Encontros: a multilevel sti/hiv intervention to increase condom use, reduce sti, and change the social environment among sex workers in Brazil. *Sex Transm Dis* 2012; **39**: 209–16.
- 34 Basu I, Jana S, Rotheram-Borus MJ, et al. HIV prevention among sex workers in India. *J Acquir Immune Defic Syndr* 2004; **36**: 845–52.
- 35 Blankenship KM, West BS, Kershaw TS, Biradavolu MR. Power, community mobilization, and condom use practices among female sex workers in Andhra Pradesh, India. *AIDS* 2008; **22** (suppl 5): S109–16.
- 36 Gangopadhyay DN, Chanda M, Sarkar K, et al. Evaluation of sexually transmitted diseases/human immunodeficiency virus intervention programs for sex workers in Calcutta, India. *Sex Transm Dis* 2005; **32**: 680–84.
- 37 Halli SS, Ramesh BM, O’Neil J, Moses S, Blanchard JF. The role of collectives in STI and HIV/AIDS prevention among female sex workers in Karnataka, India. *AIDS Care* 2006; **18**: 739–49.
- 38 Kerrigan D, Moreno L, Rosario S, et al. Environmental-structural interventions to reduce HIV/STI risk among female sex workers in the Dominican Republic. *Am J Public Health* 2006; **96**: 120–25.
- 39 Kerrigan D, Telles P, Torres H, Overs C, Castle C. Community development and HIV/STI-related vulnerability among female sex workers in Rio de Janeiro, Brazil. *Health Educ Res* 2008; **23**: 137–45.
- 40 Lippman SA, Shade SB, Hubbard AE. Inverse probability weighting in sexually transmitted infection/human immunodeficiency virus prevention research: methods for evaluating social and community interventions. *Sex Transm Dis* 2010; **37**: 512–18.
- 41 Ramesh BM, Beattie TSH, Shajy I, et al. Changes in risk behaviours and prevalence of sexually transmitted infections following HIV preventive interventions among female sex workers in five districts in Karnataka state, south India. *Sex Transm Infect* 2010; **86** (suppl 1): i17–24.
- 42 Reza-Paul S, Beattie T, Syed HUR, et al. Declines in risk behaviour and sexually transmitted infection prevalence following a community-led HIV preventive intervention among female sex workers in Mysore, India. *AIDS* 2008; **22** (suppl 5): S91–100.
- 43 Thilakavathi S, Boopathi K, Girish Kumar C, et al. Assessment of the scale, coverage and outcomes of the Avahan HIV prevention program for female sex workers in Tamil Nadu, India: is there evidence of an effect? *BMC Public Health* 2011; **11** (suppl 6): S3.
- 44 Ramakrishnan L, Gautam A, Goswami P, et al. Programme coverage, condom use and STI treatment among FSWs in a large-scale HIV prevention programme: results from cross-sectional surveys in 22 districts in southern India. *Sex Transm Infect* 2010; **86** (suppl 1): i62–68.
- 45 Rachakulla HK, Kodavalla V, Rajkumar H, et al. Condom use and prevalence of syphilis and HIV among female sex workers in Andhra Pradesh, India—following a large-scale HIV prevention intervention. *BMC Public Health* 2011; **11** (suppl 6): S1.
- 46 Mainkar MM, Pardeshi DB, Dale J, et al. Targeted interventions of the Avahan program and their association with intermediate outcomes among female sex workers in Maharashtra, India. *BMC Public Health* 2011; **11** (suppl 6): S2.

- 47 Deering KN, Boily MC, Lowndes CM, et al. A dose-response relationship between exposure to a large-scale HIV preventive intervention and consistent condom use with different sexual partners of female sex workers in southern India. *BMC Public Health* 2011; **11** (suppl 6): S8.
- 48 Boily MC, Pickles M, Lowndes CM, et al. Positive impact of a large-scale HIV prevention program among female sex workers and clients in Karnataka state, India. *AIDS* 2013; **27**: 1449–60.
- 49 Blanchard A, Mohan HL, Shahmanesh M, et al. Community mobilization, empowerment and HIV prevention among female sex workers in south India. *BMC Public Health* 2013; **13**: 234.
- 50 Gutierrez J-P, McPherson S, Fakoya A, Matheou A, Bertozzi S. Community-based prevention leads to an increase in condom use and a reduction in sexually transmitted infections (STIs) among men who have sex with men (MSM) and female sex workers (FSW): the Frontiers Prevention Project (FPP) evaluation results. *BMC Public Health* 2010; **10**: 497.
- 51 Benzaken AS, Galbán Garcia E, Sardinha JCG, Pedrosa VL, Paiva V. Community-based intervention to control STD/AIDS in the Amazon region, Brazil. *Revista de Saude Publica* 2007; **41**: 118–26.
- 52 Jana S, Bandyopadhyay N, Mukherjee S, Dutta N, Basu I, Saha A. STD/HIV intervention with sex workers in West Bengal, India. *AIDS* 1998; **12** (suppl B): S101–08.
- 53 Wheeler T, Kiran U, Dallabetta G, et al. Learning about scale, measurement and community mobilisation: reflections on the implementation of the Avahan HIV/AIDS initiative in India. *J Epidemiol Community Health* 2012; **66**: ii16–25.
- 54 Narayanan P, Moulasha K, Wheeler T, et al. Monitoring community mobilisation and organisational capacity among high-risk groups in a large-scale HIV prevention programme in India: selected findings using a Community Ownership and Preparedness Index. *J Epidemiol Community Health* 2012; **66**: ii34–41.
- 55 Jeffreys E, Autonomy A, Green J, Vega C. Listen to sex workers: Support decriminalisation and anti-discrimination protections. *Interface* 2011; **3**: 271–87.
- 56 Karnataka Health Promotion Trust. Community mobilization of female sex workers: module 2 a strategic approach to empower female sex workers in Karnataka. Bangalore, Karnataka: Karnataka Health Promotion Trust, 2008.
- 57 Ditmore MH, Allman D. An analysis of the implementation of PEPFAR's anti-prostitution pledge and its implications for successful HIV prevention among organizations working with sex workers. *J Int Aids Soc* 2013; **16**: 17354.
- 58 Pathfinder International Advocacy Programs. Fact sheet, the anti-prostitution loyalty oath: undermining HIV/AIDS prevention and US foreign policy. Watertown, MA: Pathfinder Advocacy Programs, 2006.
- 59 Cornish F, Campbell C, Shukla A, Banerji R. From brothel to boardroom: Prospects for community leadership of HIV interventions in the context of global funding practices. *Health Place* 2012; **18**: 468–74.
- 60 Global Commission on HIV and the Law. HIV and the law: risks, rights and health. 2012. <http://www.hivlawcommission.org/index.php/report> (accessed Feb 9, 2014).
- 61 NSWP. Global consensus statement on sex work, human rights, and the law. 2013. <http://www.nswp.org/resource/consensus-statement-english-full> (accessed Feb 9, 2014).
- 62 Human Rights Watch. Sex workers at risk: condoms as evidence of prostitution in four US cities. 2012. <http://www.hrw.org/reports/2012/07/19/sex-workers-risk-0> (accessed Feb 9, 2014).
- 63 WHO, UNFPA, UNAIDS Secretariat, et al. Implementing comprehensive HIV/STI programmes with sex workers: practical approaches from collaborative interventions. Geneva, Switzerland: World Health Organization, 2013.
- 64 Wurth MH, Schleifer R, McLemore M, Todrys KW, Amon J. Condoms as evidence of prostitution in the United States and the criminalization of sex work. *J Int Aids Soc* 2013; **16**: 18626.
- 65 Conecta Project. Strengthening of HIV/STI interventions in sex work in Ukraine and in the Russian Federation Briefing Paper: regarding criminalization of sex work, violence, and HIV. Amsterdam, The Netherlands: Conecta Project, 2012.
- 66 Pimenta C, Correa S, Maksud I, Deminicis S, Olivar J. Sexuality and development: Brazilian national response to HIV/AIDS amongst sex workers. Rio de Janeiro: Brazilian Interdisciplinary AIDS Association, 2010.
- 67 Argento E, Reza-Paul S, Lorway R, et al. Confronting structural violence in sex work: lessons from a community-led HIV prevention project in Mysore, India. *AIDS Care* 2011; **23**: 69–74.
- 68 The Guyana Sex Work Coalition. Empowering and organizing sex workers towards achieving and maintaining progressive self-development and increased HIV preventative actions. 19th International Aids Conference; Washington, DC; July 22–27, 2012. THGS10.
- 69 Biradavolu MR, Burriss S, George A, Jena A, Blankenship KM. Can sex workers regulate police? Learning from an HIV prevention project for sex workers in southern India. *Soc Sci Med* 2009; **68**: 1541–47.
- 70 Blankenship KM, Biradavolu MR, Jena A, George A. Challenging the stigmatization of female sex workers through a community-led structural intervention: learning from a case study of a female sex worker intervention in Andhra Pradesh, India. *AIDS Care* 2010; **22** (suppl 2): 1629–36.
- 71 Klein CH. From one 'battle' to another: the making of a travesti political movement in a Brazilian city. *Sexualities* 1998; **1**: 327–42.
- 72 Red Ribbon Award. Association de Mujeres Meretrices de la Argentina–Argentina. 2013. http://www.redribbonaward.org/index.php?option=com_content&view=article&id=338%3Aammar-argentina&catid=56&Itemid=116&lang=en#. UWWEWDeRdFc (accessed April 10, 2013).
- 73 Shinana A, Zapata T, Sehgal S, et al. Empowering sex workers to claim their right to access non-stigmatizing HIV and AIDS, health and social services in Namibia. 5th Africa Conference on Sexual Health and Rights; Windhoek, Namibia; Sept 19–22, 2012.
- 74 Arnott J, Crago AL. Rights Not Rescue: A report on female, male, and trans sex worker's human rights in Botswana, Namibia, and South Africa. Johannesburg, South Africa: Open Society Institute, 2008.
- 75 Bill & Melinda Gates Foundation. The power to tackle violence: Avahan's experience with community led crisis response in India. New Delhi, India: Avahan, 2009.
- 76 Misra G, Mahal A, Shah R. Protecting the rights of sex workers: the Indian experience. *Health Hum Rights* 2000; **5**: 89–115.
- 77 Durbar Mahila Samanwaya Committee. Micro Credit. http://durbar.org/html/micro_credit.aspx (accessed April 11, 2013).
- 78 INDOORS. Capacity building and awareness raising: a European guide with strategies for the empowerment of sex workers. Marseille, France: INDOORS, 2012.
- 79 The Synergy Project, University of Washington Center for Health Education and Research. Room for change: preventing HIV transmission in brothels. Washington, DC: The Synergy Project, 2003.
- 80 Chattopadhyay A, McKaig RG. Social development of commercial sex workers in India: an essential step in HIV/AIDS prevention. *AIDS Patient Care STDs* 2004; **18**: 159–68.
- 81 Scorgie F, Nakato D, Akoth DO, et al; African Sex Worker Alliance. "I expect to be abused and I have fear": sex workers' experiences of human rights violations and barriers to accessing healthcare in four African countries. 2011. http://www.plri.org/sites/plri.org/files/ASWA_Report_HR_Violations_and_Healthcare_Barriers_14_April_2011.pdf (accessed June 22, 2014).
- 82 Bandewar SV, Kimani J, Lavery JV. The origins of a research community in the Majengo Observational Cohort Study, Nairobi, Kenya. *BMC Public Health* 2010; **10**: 630.
- 83 Biradavolu MR, Blankenship KM, Jena A, Dhungana N. Structural stigma, sex work and HIV: contradictions and lessons learnt from a community-led structural intervention in southern India. *J Epidemiol Community Health* 2012; **66** (suppl 2): ii95–99.
- 84 Cornish F. Empowerment to participate: A case study of participation by Indian sex workers in HIV prevention. *J Community Appl Soc Psychol* 2006; **16**: 301–15.
- 85 Miller A, Simon S, Cohen J. Fostering enabling legal and policy environments to protect the health and human rights of sex workers. Johannesburg, South Africa: Open Society Institute, 2006.
- 86 Asthana S, Oostvogels R. Community participation in HIV prevention: Problems and prospects for community-based strategies among female sex workers in Madras. *Soc Sci Med* 1996; **43**: 133–48.
- 87 Leuridan E, Vercauteren A, Cornelissen T, Bilcke A, Van Damme P. Sex workers and HIV: missed opportunities. *Lancet* 2012; **380**: 1230.

- 88 Busza J, Schunter BT. From competition to community: Participatory learning and action among young, debt-bonded Vietnamese sex workers in Cambodia. *Reprod Health Matters* 2001; **9**: 72–81.
- 89 Campbell C, Mzaidume Z. Grassroots participation, peer education, and HIV prevention by sex workers in South Africa. *Am J Public Health* 2001; **91**: 1978–86.
- 90 Basu A, Dutta MJ. Participatory change in a campaign led by sex workers: connecting resistance to action-oriented agency. *Qual Health Res* 2008; **18**: 106–19.
- 91 Newman PA. Reflections on Sonagachi: an empowerment-based hiv-preventive intervention for female sex workers in West Bengal, India. *Women's Studies Q* 2003; **31**: 168–79.
- 92 O'Brien NC. Moving from paradigm to practice: the Ashodaya sex worker empowerment project in Mysore India and its promise for HIV/AIDS prevention. Burnaby, BC: Simon Fraser University, 2007.
- 93 Laga M, Galavotti C, Sundaramon S. The importance of sex-worker interventions: the case of Avahan in India. *Sex Transm Infect* 2010; **86**: i6–i7.
- 94 Michael E, Murugan SK, Viswanatha L, Pushpalatha R. Innovations to attract young female sex workers to access STI services in drop in centres (DIC): a case study from bangalore, South India. *Sex Transm Infect* 2011; **87**: A235–36.
- 95 Red Ribbon Award. Nikat Women's Association–Ethiopia. 2013. http://www.redribbonaward.org/index.php?option=com_content&view=article&id=355%3Anikat-ethiopia&catid=56&Itemid=116&lang=en#.UWWG1DeRfAA (accessed April 10, 2013).
- 96 Cornish F, Ghosh R. The necessary contradictions of 'community-led' health promotion: a case study of HIV prevention in an Indian red light district. *Soc Sci Med* 2007; **64**: 496–507.
- 97 Campbell C, Cornish F. How can community health programmes build enabling environments for transformative communication? Experiences from India and South Africa. *AIDS Behav* 2012; **16**: 847–57.
- 98 Dixon V, Reza-Paul S, D'Souza FM, O'Neil J, O'Brien N, Lorway R. Increasing access and ownership of clinical services at an HIV prevention project for sex workers in Mysore, India. *Glob Public Health* 2012; **7**: 779–91.
- 99 Greenall M. Strengthening global commitment to sex worker rights: background paper for a proposed donor collaboration. 2009. <http://health.accel-it.lt/assets/Seminar%20documents%20for%20download/Sex%20worker%20rights%20donor%20collaboration%20-%20background%20report%20Final.pdf> (accessed June 22, 2014).
- 100 de Souza R. Creating "communicative spaces": a case of NGO community organizing for HIV/AIDS prevention. *Health Commun* 2009; **24**: 692–702.
- 101 Bishakha D. Ain't I a woman? A global dialogue between the Sex Workers' Rights Movement and the Stop Violence against Women Movement. Bangkok, Thailand: CREA and CASAM, 2009.