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

CRD summary
This review concluded that the available evidence showed that community empowerment held great promise as an effective approach for reducing HIV risk in sex workers. Although the evidence identified supports this conclusion, concerns about the weak quality of the evidence mean that the authors' recommendations for further research appear appropriate.

Authors' objectives
To review the effectiveness of community empowerment interventions for addressing HIV prevention in sex workers in low-income and middle-income countries, and to review barriers and facilitators to their implementation.

Searching
PubMed, PsycINFO, Sociological Abstracts, EMBASE, and CINAHL were searched from January 2003 to February 2013. Search terms were reported. Reference lists of included studies, a relevant WHO database and references from key organisations were also searched. Experts were contacted to identify additional articles. Both published and unpublished sources were sought with no language restrictions. This review updated findings from a previous review of studies published up to October 2010 (see linked record).

Study selection
Studies of effectiveness were included if they assessed community empowerment-based HIV/sexually transmitted infection prevention interventions in sex workers in low-income and middle-income countries. Eligible outcomes included HIV infection, sexually transmitted infections, and condom use with clients. Any study design was eligible if it involved a pre-post assessment or multi-arm comparison of individuals or groups who received the intervention versus those who did not. Studies that described the conceptualisation, implementation, cost, scale-up, or monitoring of an HIV prevention intervention for sex workers using an empowerment strategy were also included in a separate review.

Most included effectiveness studies were from India with some from Brazil and the Dominican Republic. Eight projects were evaluated. All studies included female sex workers, and one project also included male and transgender sex workers. Most evaluation studies involved both establishment-based and non-establishment-based sex workers. Most studies incorporated or intensified community empowerment within existing programmes, which included traditional HIV prevention activities such as community-led peer education, condom distribution, and the promotion of periodic sexually transmitted infection screening. Definitions and levels of community empowerment varied across the studies. Details of studies on barriers and facilitators were not reported.

Abstracts were screened by one reviewer and full text references by two reviewers. Differences were resolved through consensus.

Assessment of study quality
The quality of effectiveness studies was assessed using an 8-point scale adapted for HIV behavioural interventions assessment. The quality of randomised trials was also assessed using the Cochrane risk of bias tool. Study quality was assessed by two reviewers independently, with disagreements resolved through consensus or by a third reviewer as needed. It appeared that the quality of studies on barriers and facilitators was not assessed.

Data extraction
For the review of effectiveness, outcomes data were extracted to calculate odds ratios (ORs). For studies reporting outcomes at several time points, the longest follow-up duration was preferred. Data were extracted independently by two reviewers, with disagreements resolved through consensus or by a third reviewer. Data on barriers and facilitators were coded according to three categories: global, state, and community levels. The authors did not state how many reviewers extracted data on barriers and facilitators.
Methods of synthesis
Where possible, odds ratios were combined in a meta-analysis using a random-effects model. Heterogeneity was assessed using $I^2$ (with a p-value cut-off of 0.10). Publication bias was assessed through visual inspection of funnel plots. Otherwise, studies were summarised narratively. Data on the most salient facilitators and barriers to programme implementation and scale-up were summarised narratively according to three categories: global, state, and community levels.

Results of the review
Effectiveness: Twenty-two articles were included in the review of effectiveness, including 30,325 sex-workers (range 141 to 7,828 participants). All studies used cross-sectional or serial cross-sectional designs, except for one cohort study and one randomised trial at uncertain or high risk of bias.

Community-empowerment-based responses to HIV in sex workers were associated with significant reductions in HIV (OR 0.68, 95% CI 0.52 to 0.89; five studies) and sexually transmitted infections (gonorrhoea OR 0.61, 95% CI 0.46 to 0.82, seven studies; chlamydia OR 0.75, 95% CI 0.57 to 0.98, seven studies; syphilis OR 0.53, 95% CI 0.41 to 0.69, four studies), and increases in condom use (OR 3.27, 95% CI 2.32 to 4.62; eight studies). There was evidence of heterogeneity for HIV ($I^2=74\%$), chlamydia ($I^2=61\%$), gonorrhoea ($I^2=33\%$) and condom use ($I^2=92\%$). Subgroup analyses showed similar improvements in condom use in regular and new clients.

Among studies that were not included in the meta-analyses, one cluster-RCT found a statistically significant improvement in condom use over time in the intervention group compared with control ($p=0.002$), and one cohort study reported an increase in consistent condom use which was statistically significant with regular clients (OR 1.9, 95% CI 1.1 to 3.3), but not with new clients (OR 1.6, 95% CI 0.9 to 2.8) at 30 days follow-up.

Barriers and facilitators: One hundred and ten documents on barriers and facilitators were included. At global level, the main barriers to implementation and scale-up included regressive international policies and discourse, as well as funding constraints. At national level, laws criminalising sex work could impede sex workers' ability to organise and increase stigma, discrimination, and violence in sex workers.

Key facilitators at global and national levels included decriminalisation of sex work. At community level, building of social cohesion among sex workers, and developing relationships with potential allies and partners, and building of leadership and capacity among sex workers were considered key facilitators.

Authors' conclusions
The available evidence showed that community empowerment held great promise as an effective approach for reducing HIV risk in sex workers.

CRD commentary
The review question was clearly reported. Bibliographic searches covered a range of published and unpublished sources. Reporting of selection criteria for the barriers and facilitators review did not appear sufficiently detailed to allow replicability. Attempts were made to limit the risk of reviewer error and bias throughout the stages of the effectiveness review. It is unclear whether similar steps were undertaken for the review of barriers and facilitators.

In the effectiveness review, results of the quality assessment were not reported, although the included studies used weak study designs. No data on the design and quality of studies on barriers and facilitators were reported, which made the quality of the evidence difficult to assess. The choice of synthesis methods for studies of effectiveness appeared generally appropriate. There was evidence of substantial heterogeneity, although the direction of effect estimates appeared generally consistent across studies. The reporting of analysis methods for the review of barriers and facilitators was limited.

Although the findings of the review of effectiveness reflected the evidence, concerns about the weak quality of the evidence mean that the authors' recommendations for more rigorous research appear appropriate. Due to limited review reporting, the validity of the findings on barriers and facilitators is uncertain.
Practice: The authors stated that scale-up of community empowerment initiatives could contribute to curbing of the HIV epidemic in sex workers and the general population. They stated that social and political change were needed on the recognition of sex work as work (both globally and locally) to encourage increased support for community empowerment responses to HIV. They stated that community empowerment processes should be envisioned, shaped, and led by sex workers themselves.

Research: The authors stated that future studies were needed to measure the effect of community empowerment approaches to HIV in sex workers across geographical and epidemic settings on both HIV and non-HIV outcomes more rigorously. They stated that interventions should be evaluated in combination with HIV prevention interventions that integrate biomedical, behavioural, and structural elements. In addition, reliable aggregate measures that can be validated across settings should be used to evaluate community empowerment processes, and that qualitative and ethnographic research, and research led by sex workers should be expanded.

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- 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

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Other publications of related interest

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.