



*Twelfth in a series, this summary fact sheet presents existing evidence from rigorously evaluated interventions to prevent HIV transmission in developing countries. Results are presented here from the meta-analysis of social capital studies published in leading scientific journals. In contrast to the many anecdotal reports of best practices, this series provides readers with the strongest evidence available in a user-friendly format. The evidence provides program planners, policy makers, and other stakeholders with information about “what works.”*

**Social capital** is a complex concept that captures how people are connected, both between and within social groups, and includes both the relationships that exist between people and the access to material and political goods that these relationships can provide.<sup>1</sup> Although definitions of social capital vary, one prominent theorist, Robert Putnam, defines social capital as “the networks, norms, and social trust that facilitate cooperation for mutual benefit.”<sup>2</sup> Putnam delineates two main forms of social capital: bonding and bridging.<sup>2</sup> Bonding social capital refers to relationships within a social group, whereas bridging social capital refers to interactions across or between social groups. Other definitions of social capital place emphasis on its role in relation to the socio-economic conditions of and inequalities within society.<sup>3</sup>

This fact sheet presents results from a recent systematic review of the effect of social capital interventions on HIV-related outcomes.<sup>4</sup> Although social capital is a broad topic, the systematic review defined a social capital intervention as “any intervention which seeks to create a group with the intention of strengthening ties between group members; or strengthening existing ties within a group; or strengthening ties between groups. A social ‘tie’ is defined as a social connection that elicits mutual feelings of trust, reciprocity, and recognition of shared identity or increases access to shared information and resources.”<sup>4</sup> This definition understands social capital as operating at a group level rather than at an individual level. Therefore, the review did not include interventions that focused on a pair of individuals, such as strengthening ties between a husband and wife or creating ties between a patient and a “treatment buddy” to help with adherence to HIV medication. Also excluded were peer-driven interventions that involved one-to-one interactions, or that focused

on providing education in a group setting rather than building social ties between group members. Similarly, social support group interventions were only included if they appeared to strengthen ties between group members, rather than simply using the group format to provide education or individual-level social support.

While extensive research has examined the relationship between social capital and health, findings show that these relationships are complex, particularly in the area of HIV.<sup>5</sup> In general, public health outcomes tend to be better when social capital measures are high.<sup>6</sup> Previous literature suggests that social capital can lead to positive health-related outcomes by increasing access to resources, social support, and social control. However, research also suggests social capital can have detrimental effects, such as creating exclusionary environments and restricting personal freedom based on group norms and rules.<sup>7</sup> In addition, different levels of social capital may be associated with different outcomes, and generally, it is not social connections by themselves which result in health benefits; instead, it is likely the content and resources available from social connections that are most important in the relationship between social capital and health outcomes.<sup>7</sup>

Further, a statistical association between high social capital and positive public health measures does not necessarily mean that intervening to increase social capital will lead to improved health outcomes. Some researchers have asked whether social capital can be intentionally generated.<sup>8</sup> Therefore, a systematic review by Fonner et al.<sup>4</sup> examined the efficacy of interventions involving social capital enhancement on changing HIV-related outcomes. While all the interventions included in the review involved social capital, building or strengthening social ties was often not the sole focus of the intervention but rather served a



supporting role to facilitate behavior change, enhance social support, or influence social and structural risk factors including the promotion of human rights.

### Effectiveness of Social Capital Interventions for HIV

Results from the Fonner et al.<sup>4</sup> systematic review showed that social capital interventions in developing countries had the following effects on participants compared to those who were not exposed to the intervention or compared before and after the intervention:

#### Sex worker empowerment interventions involving social capital (n=23 articles, 8 studies)

- Twenty-three articles from eight studies evaluated community empowerment interventions with sex workers that included building social capital among group members.
- Geographic diversity was limited, as most articles were from India (n=18), with the rest from Brazil (n=4) and the Dominican Republic (n=1).
- Thirteen articles were from the Avahan project in India.
- There was one randomized controlled trial (RCT); most studies used cross-sectional or serial cross-sectional designs.
- A previous meta-analysis of community empowerment interventions among sex workers<sup>9</sup> included all but one of these articles using similar inclusion criteria to the Fonner et al. review. In this meta-analysis, community empowerment interventions among sex workers were associated with reduced prevalence of HIV (odds ratio [OR]: 0.68; 95% confidence interval [CI]: 0.52-0.89), gonorrhea (OR: 0.61; 95% CI: 0.46, 0.82), chlamydia (OR: 0.74; 95% CI: 0.57, 0.98), and high-titre syphilis (OR: 0.53; 95% CI: 0.41, 0.69) and increased consistent condom use with clients (OR: 3.27; 95% CI: 2.32, 4.62).<sup>9</sup>

#### Group-based microfinance interventions involving social capital (n=4 articles, 2 studies)

- Four articles from two studies evaluated group-based microfinance interventions that included building social capital among group members.
- All articles in this group were from Africa, with three articles from the IMAGE study in South Africa and one from the Strengthening STD/HIV Control Project in Kenya.
- In South Africa, the IMAGE project randomized groups to either microfinance alone, microfinance with health education, or control. One goal of this



Community volunteers in Minya, Egypt at a Community Development Association meeting.

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intervention was to generate social capital through bringing women together to expand their social networks, build solidarity, and generate enthusiasm for prioritizing HIV/AIDS issues in the community. Microfinance alone compared to control did not show a consistent pattern of intervention effects across a variety of outcomes. Microfinance plus health education, however, was more promising. Compared to control participants, IMAGE participants had higher rates of HIV testing and lower rates of unprotected sex with a non-spousal partner, but there was no difference in frequency of multiple partnerships. For additional outcomes related to knowledge, attitudes, communication, violence, gender roles, collective action, and social engagement, there was a general trend towards improved outcomes. IMAGE participants also reported a 55% reduction in intimate partner violence over two years.

- In Kenya, female sex workers in urban slums were included in an intervention that provided peer education, condom distribution, group-based microfinance loans, and business counseling and mentorship. According to study authors, the program sought to build social ties between sex workers by having women form self-help groups, which could be used for personal support purposes and/or economic purposes, as women served as co-guarantors for loans given to women within their group. After the intervention, women reported fewer total and regular sex partners, but no change in casual sex partners. They also reported increased consistent condom use with regular partners, but no change in already high rates of condom use with casual partners.

### Support group interventions involving social capital (n=10 articles, 9 studies)

- Ten articles from nine studies evaluated support group interventions that included building social capital among group members.
- These articles were predominantly conducted in Africa and included South Africa (n=4), Kenya (n=1), Nigeria (n=1), Zambia (n=1), Thailand (n=1), Peru (n=1), and Haiti (n=1).
- These studies provided support groups for people living with HIV (PLHIV), HIV-affected families and caregivers, orphans and vulnerable children, and youth.
- Support group members generally showed improved psychological and family functioning outcomes, as well as improvements in depressive symptoms, social support/social integration, and HIV-related stigma.
- Antiretroviral adherence support groups for PLHIV showed higher rates of virologic suppression and lower mortality. General health among PLHIV also showed improvements in one study.

### Peer interventions involving social capital (n=3 articles, 3 studies)

- Three articles evaluated peer interventions that included building social capital among group members.
- All articles in this group were from Asia, with two articles from China and one article from Thailand.
- In China, a peer education intervention bringing together men who have sex with men (MSM) resulted in increased reported condom use with casual partners among intervention participants; there was no change among control participants.
- A second study in China held community events for PLHIV and their families to build social integration. Participants reported significant improvements in depressive symptoms, social support, and family functioning compared to controls, although social support and family functioning outcomes showed mixed results over time.

## Terminology & Acronyms

### Confidence interval

The range of values within which the “true value” can be expected to fall.

### Confidence level

The likelihood that the “true value” will fall within the confidence interval.

### Effect size

A measurement of the magnitude of change (e.g., the average point increase in a qualifying examination score from taking a test preparation course).

### Meta-analysis

Analytic method that gathers information from multiple studies and combines them statistically to determine whether an intervention is effective.

### MSM

Men who have sex with men

### Odds ratio

The ratio of the probability of an event occurring in one group to the probability of the same event occurring in a referent group; for example, an odds ratio of 2.0 for a condom promotion means that those in the treatment group were twice as likely as those in the control group to use condoms in last casual sexual encounter.

### PLHIV

People living with HIV

### RCT

Randomized controlled trial

### Social capital

The networks, norms, and social trust that facilitate cooperation for mutual benefit.

### STI

Sexually transmitted infection

- In Thailand, a peer-based intervention for young methamphetamine users was evaluated in a RCT. Both the intervention and control groups showed improvements in methamphetamine use, condom use, and sexually transmitted infections (STIs) over time, but there was no difference across groups.

### Other social capital interventions (n=3 articles, 3 studies)

- Three articles evaluated other kinds of social capital building interventions.
- These articles were from Mexico (n=1), China (n=1), and one article reported on an intervention in five African countries: Lesotho, Malawi, South Africa, Swaziland, and Tanzania.

- In Mexico, an intervention brought together MSM to build collective action and empowerment. Participants reported increased HIV knowledge and condom use compared to non-participants.
- In five African countries, a health sector-based intervention sought to empower PLHIV and strengthen bridging social capital by pairing them with nurses to develop stigma-reduction interventions. PLHIV involved in the intervention teams reported reduced stigma and increased self-esteem.
- In China, drug users were helped to find and build support groups with family, non-drug-user friends and community groups; participants who couldn't identify any non-drug-user friends were given a list of community volunteers who could fill the role. After the intervention, participants showed increased HIV knowledge and condom use and decreased unsafe drug use.

### **How Is the Effectiveness of a Social Capital Intervention Determined?**

The findings presented in this fact sheet come from a recent systematic review of 43 articles across 25 studies. The analysis examined interventions related to social capital and their impact on behavioral, psychological, or biological outcomes related to HIV. Of the 43 articles, 12 were conducted in sub-Saharan Africa, 23 in East and Southeast Asia, and 8 in Latin America and the Caribbean.

### **Selection Criteria and Rigor Criteria of Studies Included in the Fonner et al. Meta-analysis**

A study had to meet three criteria to be included in the analysis:

1. present behavioral, psychological, or biological outcomes related to HIV in developing countries
2. use either a pre-/post- or multi-arm design
3. appear in a peer-reviewed journal between January 1990 and May 2012

Studies that did not meet these criteria were excluded.

### **What Do these Data Tell Us About Implementing Social Capital Interventions as Part of a Prevention Program?**

The available evidence suggests that interventions that seek to increase social capital can have a positive effect on HIV-related outcomes. Empowerment interventions among sex workers involving bonding social capital tended to show impacts such as increased condom

use and decreased STI prevalence. However, these interventions involved many components in addition to social capital building, although building solidarity and group cohesion was seen as a crucial step in the empowerment process. Effects from interventions involving group-based microfinance were limited, although participation in the IMAGE study was associated with reduced intimate partner violence. Results from the support-group interventions demonstrated that participation was associated with outcomes such as improved psychological functioning and well-being. Results from the peer-based social capital interventions showed mixed effects on HIV-related outcomes, while results from the "other" category of social capital interventions showed promising effects for reducing HIV-related behavioral risks and stigma.

However, across studies, not all outcomes were positively affected, and many studies did not measure potential negative outcomes. This review could not assess what negative impacts, if any, social capital had on health-related outcomes due to lack of measurement.

Most interventions included in this review aimed to build or strengthen social ties within a group (bonding social capital). This type of social capital building was common among interventions involving sex workers, peers, and support groups for PLHIV and caregivers. Few interventions sought to form or strengthen social ties between groups (bridging social capital). Examples of bridging social capital from this review included connecting drug users with non-drug-using friends, bringing together nurses and PLHIV to create a stigma-reducing intervention, and facilitating relationships between sex workers and police, brothel managers or madams. Recently, a third type of social capital, referred to as linking social capital, has been used to describe bonds formed between groups of differing levels of power and authority, such as between sex workers and police.<sup>10</sup> This type of social capital may be especially important to marginalized groups because these relationships can increase access to social and material resources and provide safer environments.

### **What More Do We Need to Know about the Effectiveness of Social Capital Interventions?**

The available evidence suggests that interventions that seek to increase social capital can have a positive effect on HIV-related outcomes. Studies on social capital have been conducted in multiple settings globally and with different populations. However, some intervention approaches were used primarily with certain populations

or in certain regions. While there were a few rigorous and high-profile RCTs, most studies used cross-sectional, serial cross-sectional, or before-after designs with greater risk of bias. Additionally, many interventions included social capital building as one component of a multi-faceted intervention, thus making it difficult to tease out effects directly linked to social capital.

Future research should expand the geographical scope of interventions within each of these categories. Studies should also include reliable aggregate measures of social capital to determine whether the interventions were successful at increasing various dimensions of social capital as well as health-related outcomes. More research is also needed to understand the mechanisms via which social capital impacts different health outcomes. This could be accomplished by looking at variables and processes that mediate and moderate relationships between social capital and health.

Results may be subject to publication bias, where studies showing positive results are more likely to be published than studies showing negative results. In addition, there is the possibility that some articles that should have been included in the review were not identified by the search methods used. In particular, the review only included articles that clearly intended to strengthen ties within or between groups. Many other studies may have done this, but if this was not clearly reported in the publication, the article was not included in the Fonner et al. review. Finally, social capital is a complex concept which has been defined differently by various social theorists. The definition of social capital used in the review may have excluded articles which would have been included under other definitions of social capital.

### Additional Website Resource

[http://www.aidstar-one.com/promising\\_practices\\_database/g3ps/intervention\\_microfinance\\_aids\\_and\\_gender\\_equity\\_image\\_study](http://www.aidstar-one.com/promising_practices_database/g3ps/intervention_microfinance_aids_and_gender_equity_image_study)

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