

# Understanding the Impact of a Microfinance-Based Intervention on Women's Empowerment and the Reduction of Intimate Partner Violence in South Africa

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The Millennium Development Goals highlight the need to address gender inequality as a critical foundation for human development.<sup>1</sup> Violence against women is an explicit manifestation of gender inequality and is increasingly being recognized as an important risk factor for a range of poor health and economic development outcomes. A substantial body of international research has documented the magnitude and forms of such violence across a range of settings, in low-, middle-, and high-income countries.<sup>2,3</sup> Intimate partner violence (IPV)—violence perpetrated by a spouse or intimate partner—is the most common form of gender-based violence, and in addition to causing direct injury or loss of life, it increases vulnerability to a range of negative health outcomes, including HIV/AIDS.<sup>4–6</sup>

To date, IPV interventions have ranged from those targeting affected individuals (such as health sector interventions, shelters for battered women, or treatment programs for abusers) to those reaching the broader community (such as school-based programs and public awareness campaigns challenging the acceptability of such violence).<sup>7–9</sup> However, as recent reviews have noted,<sup>10,11</sup> few approaches to preventing or responding to gender-based violence have been rigorously evaluated, even in high-income countries.

Although IPV occurs across all socioeconomic groups, studies suggest that women who live in poverty are more likely to experience such violence. The fundamental link between violence and the continued subordinate status of women in society is also well recognized.<sup>12</sup> Although it has been suggested that women who are more economically and socially empowered may be protected from IPV, interventions that aim to empower women and focus on addressing poverty or

**Objectives.** We sought to obtain evidence about the scope of women's empowerment and the mechanisms underlying the significant reduction in intimate partner violence documented by the Intervention With Microfinance for AIDS and Gender Equity (IMAGE) cluster-randomized trial in rural South Africa.

**Methods.** The IMAGE intervention combined a microfinance program with participatory training on understanding HIV infection, gender norms, domestic violence, and sexuality. Outcome measures included past year's experience of intimate partner violence and 9 indicators of women's empowerment. Qualitative data about changes occurring within intimate relationships, loan groups, and the community were also collected.

**Results.** After 2 years, the risk of past-year physical or sexual violence by an intimate partner was reduced by more than half (adjusted risk ratio=0.45; 95% confidence interval=0.23, 0.91). Improvements in all 9 indicators of empowerment were observed. Reductions in violence resulted from a range of responses enabling women to challenge the acceptability of violence, expect and receive better treatment from partners, leave abusive relationships, and raise public awareness about intimate partner violence.

**Conclusions.** Our findings, both qualitative and quantitative, indicate that economic and social empowerment of women can contribute to reductions in intimate partner violence. (*Am J Public Health*. 2007;97:1794–1802. doi:10.2105/AJPH.2006.095521)

gender inequalities have not yet been designed and tested.<sup>9–13</sup>

Our Intervention With Microfinance for AIDS and Gender Equity (IMAGE) study used a cluster-randomized trial design to test the hypothesis that combining a microfinance-based poverty alleviation program with participatory training on HIV risk and prevention, gender norms, domestic violence, and sexuality can improve economic well-being, empower women, and lead to reductions in IPV.

## METHODS

The IMAGE study was conducted between September 2001 and March 2005 in South Africa's rural Limpopo province. Although South Africa is a middle-income country, poverty is widespread in this province<sup>14</sup> and is accompanied by high levels of unemployment and labor migration to neighboring cities.<sup>15,16</sup>

Although the improvement of women's status has been identified as a priority by the South African government and the principle of gender equality is enshrined in South Africa's constitution, in many rural areas, traditional cultural norms continue to perpetuate the subordinate status of women, and gender-based violence is widely accepted as a social norm.<sup>17</sup>

## The IMAGE Intervention

**Microfinance component.** Microfinance is a development strategy that provides credit and savings services to the poor, particularly rural women, for income-generating projects. Since the mid-1980s, microfinance programs have reached nearly 100 million clients in Asia, Africa, and Latin America.<sup>18</sup> In addition to providing economic benefits, microfinance may be an effective vehicle for women's empowerment, and newly acquired business



A participant in the IMAGE intervention with her business.



Note. This photo appeared on December 3, 2003, in the local newspaper *The Steelburger*.

Women participating in the IMAGE study who organized their village's first public march to raise awareness about domestic violence during the International 16 Days of Activism to End Violence Against Women campaign.

skills may be accompanied by improvements in self-esteem and self-confidence, the ability to resolve conflicts, household decisionmaking power, and expanded social networks.<sup>19–21</sup> In addition, gains in child mortality, nutrition, immunization coverage, and contraceptive use have all been demonstrated.<sup>19,22–24</sup>

However, the relation between microfinance and women's empowerment is complex, and its benefits cannot be assumed in all contexts. Providing credit to women does not guarantee their control over its use, and the pressure to pay back loans can add to the already heavy burden of responsibilities borne by poor women.<sup>25–27</sup> Although some studies<sup>27–29</sup> have suggested that microfinance can reduce the risk of IPV, others have noted that attempting to empower women can potentially exacerbate this risk by challenging established gender norms and provoking conflict within the household.<sup>10,13,20,30</sup> In light of these contradictory findings, the question of whether women's empowerment more broadly, and participation in microfinance in particular, contributes to reductions in violence has remained an unresolved research question of central policy importance.<sup>10,31</sup>

The microfinance component of the IMAGE intervention was implemented by the Small Enterprise Foundation, a South African nongovernmental organization with more than 40 000 active clients. Eligible loan recipients and control participants were identified using the Small Enterprise Foundation's participatory wealth-ranking criteria, which identified women aged 18 years and older who lived in the poorest households in each village.<sup>32</sup> On the basis of the Grameen Bank model,<sup>33</sup> groups of 5 women serve as guarantors for each other's loans, and all 5 must repay their loans before the group qualifies for more credit. Loan centers of approximately 40 women meet fortnightly to repay loans, apply for additional credit, and discuss business plans.

*The Sisters-for-Life program.* Some authors have suggested that adding a gender-focused training component to the financial dimension of microfinance programs may catalyze broader empowerment benefits while diminishing the risk of gender-related conflict.<sup>26,28,30,34,35</sup>

In the IMAGE intervention, a participatory learning program called Sisters-for-Life was developed and integrated into loan center meetings.<sup>36</sup> Sisters-for-Life comprised 2 phases. Phase 1 consisted of ten 1-hour training sessions and covered topics including gender roles, cultural beliefs, relationships, communication, domestic violence, and HIV infection and aimed to strengthen communication skills, critical thinking, and leadership. Because group-based learning can foster solidarity and collective action,<sup>37</sup> phase 2 encouraged wider community mobilization to engage both youths and men in the intervention communities.

Women deemed "natural leaders" by their peers were elected by loan centers to undertake a further week of training and subsequently worked with their centers to address priority issues including HIV infection and IPV. Sisters-for-Life was developed and piloted in conjunction with a South African domestic violence nongovernmental organization and was delivered alongside microfinance services by a separate team of trainers over a 12-month period. Further details about the intervention have been published elsewhere.<sup>38</sup>

### The Evaluation

*Measuring Empowerment.* Empowerment has been defined as "the process of increasing capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes."<sup>39</sup> Despite growing interest in empowerment and its potential to affect health, the development of indicators to evaluate empowerment processes and outcomes is still at an early stage.<sup>39-41</sup>

Most approaches recognize a dynamic interplay between gaining internal skills and overcoming external barriers, often drawing upon a conceptual framework that includes "power within" (internal qualities, such as self-confidence or critical thinking skills, that contribute to individual agency); "power to" (the creation of new opportunities without domination; factors such as the ability to make independent decisions that determine and demonstrate such agency) and "power with" (communal dimensions, such as group solidarity or collective action, which acknowledge that positive change may often be effected through individuals acting together, rather than alone).<sup>26,40,42</sup>

Questions encompassing these dimensions of empowerment were drawn from the development and public health literature, piloted, and adapted to the rural South African context. Nine quantitative indicators of empowerment were developed: self-confidence, financial confidence, challenging gender norms, autonomy in decisionmaking, perceived contribution to the household, communication within the household, relationship with partner, social group membership, and participation in collective action (Table 1). In addition, 7 focus group discussions were conducted with 46 intervention participants to gain a deeper understanding of how they defined and experienced empowerment in the context of the study.<sup>43</sup>

*Measuring intimate partner violence.* The primary violence outcome of the trial was experiencing physical or sexual IPV within the past year. In each interview, women were asked directly about their experience with different acts of physical or sexual violence by male partners ever and in the past year (Table 1). These questions were drawn from the international World Health Organization Violence Against Women study instrument.<sup>2</sup>

Two secondary violence outcomes measured the past year's experience of controlling behavior by an intimate partner, as well as respondents' attitudes toward the acceptability of IPV in different circumstances (Table 1). These secondary outcomes were chosen because of evidence suggesting that both are associated with a risk of IPV<sup>2,12,17</sup> and because, given the limited timeframe of the study, one might anticipate capturing changes in these indicators, even in the absence of observed reductions in IPV.

In addition, throughout the study period, an anthropologist conducted nonparticipant observation within loan center meetings, and trainers kept individual diaries documenting participants' responses to the training and community mobilization phases of the intervention. A facilitated discussion with 32 natural leaders at the conclusion of the study elicited their perspectives on how loan group members had experienced and responded to IPV during the study.

### Study Design and Analysis

The study protocol underwent peer review<sup>32</sup> and was registered with the National Institutes of Health. Details on the setting, study design, and

analysis strategy can be found elsewhere.<sup>44</sup> Briefly, 8 villages were pair-matched on the basis of size and accessibility. One village from each pair was randomly allocated to receive the intervention at the outset or at the end of the study period. With the use of participatory wealth ranking, an intervention group and a control group of age- and poverty-matched women were selected contemporaneously and followed over 2 years.

From the outset, it was recognized that, because of the small number of clusters, the trial would have limited power to detect statistically significant differences but would generate unbiased measures of effect.<sup>32</sup> In addition to this cohort, the study assessed indirect effects of the intervention on household and community members, and these results have been reported elsewhere.<sup>44</sup>

Quantitative data were collected with face-to-face interviews at baseline and 2 years after exposure to the intervention. All interviews were conducted by female interviewers who had received 4 weeks of intensive training, including technical, ethical, and safety considerations in conducting research on IPV.<sup>45</sup> Every effort was made to ensure privacy during the interviews and to suspend discussion of sensitive topics when interruptions could not be avoided. All interviews concluded by providing information about organizations and services offering support to women experiencing violence.

The intervention was implemented in control communities after study completion. Adjusted risk ratios were generated for all outcome data at follow-up, accounting for baseline differences, marital status, and data clustering at the village level.<sup>44</sup>

## RESULTS

### Study Enrollment and Intervention Uptake

During the 15-month recruitment period, 430 loan recipients and an equal number of matched control participants were enrolled in the study. Most intervention and control women were successfully interviewed at baseline (99% and 97%, respectively). Follow-up rates were high in both groups, although slightly higher in the intervention group (90% and 84%, respectively).<sup>44</sup>

Approximately 1750 loans were disbursed over 3 years, valued at more than

**TABLE 1—Indicators of Empowerment and Intimate Partner Violence: Intervention With Microfinance for AIDS and Gender Equity Study, Limpopo Province, South Africa, September 2001 to March 2005**

Indicators	Survey Questions	Hypothesized Effect From Intervention
<b>Empowerment Indicators</b>		
<b>Power within<sup>a</sup></b>		
Self-confidence	2 questions (positive response to 1 or both of the questions) If you were at a community meeting, how confident are you that you could raise your opinion in public? (very confident) Neighbors often share similar problems—how confident do you feel about offering advice to your neighbor? (very confident)	Increase
Financial confidence	2 questions (positive response to 1 or both of the questions) In the event of a crisis (e.g., house fire) how confident are you that you alone could raise enough money to feed your family for 4 weeks? (very confident) Is your ability to survive this kind of crisis better, the same, or worse than it was 2 years ago? (better)	Increase
Challenges gender norms	Series of 6 statements accepting traditional gender norms, e.g., "A woman should do most of the household chores, even if the husband is not working" (disagree with all 6)	Increase
<b>Power to<sup>a</sup></b>		
Autonomy in decisionmaking	Series of 10 questions about household decisions, e.g., making small, medium, or large purchases, taking children to the clinic, visiting family or friends; (does not need partner's permission for 5 of 10)	Increase
Perceived contribution to household	1 question How does your partner view the money that you bring into the household? (yours is the most important contribution)	Increase
Household communication	3 questions (positive response to any of the questions) In the past year, have you communicated with anyone about sex or sexuality? 1. Your partner? 2. Your children? 3. Other household members?	Increase
Partner relationship	2 questions about relationship with intimate partner over the past year (positive response to 1 or both of the questions) Has he encouraged you to participate in something outside the home that was only for your benefit? Has he asked your advice about a difficult issue or decision?	Increase
<b>Power with<sup>a</sup></b>		
Social group membership	Series of 18 questions about participation in a range of formal and informal social groups, e.g., burial society, village health committee (number of such groups)	Increase
Collective action	1 question In the past 2 years, have you participated in a meeting, march, or rally about HIV/AIDS awareness? (positive response to question)	Increase

Continued

US\$290 000. These loans were usually used to support retail businesses, such as fruit and vegetable vending or second-hand clothing and tailoring businesses. Repayment rates were 99.7%. Among women interviewed at follow-up, 78% had taken out 3 or more loans, 65% had attended more than 7 training sessions, and most were still members of the program. Peers elected 37 women to attend the weeklong leadership training, and these women played a central role in community mobilization.

#### Baseline Characteristics

At baseline, women ranged in age from 18 to 96 years, and intervention and control groups were generally well-matched. In both groups, the mean age was 42 years, married women predominated, approximately half resided in female-headed households, and more than one third were the household heads. More than 70% reported having had to beg for food or money in the past year.<sup>44</sup>

#### Effects on Economic Well-Being and Women's Empowerment

Focus group discussions with intervention participants revealed that there was no equivalent word for *empowerment* in the local language. Rather, women used phrases such as "the power to be enlightened" or "the ability to claim personal power and use it to change for the better" to express this concept. Economic well-being and the ability to provide for one's family emerged as an important foundation for such empowerment. However, as one woman put it: "You can have money and still not be empowered."

When speaking about how participation in the intervention affected their lives, most women described experiences that could be mapped to the 3 domains of power (power within, power to, and power with) described earlier (Table 2). Although some women alluded to challenging gender norms and the broader social and political status of women, most defined empowerment within the more intimate spheres of household and community life.<sup>43</sup>

Quantitative data on economic well-being and empowerment are shown in Table 3. There was evidence of increased assets, expenditures, and membership in informal

TABLE 1—Continued

Primary outcome	Intimate partner violence indicators	Decrease
Past year experience of physical or sexual violence	2 questions on physical violence and 2 questions on sexual violence (positive response to any of the questions) In the past 12 months, has your partner ever 1. Pushed you or shoved you? 2. Hit you with his fist or something else that could hurt you? 3. Physically forced you to have sex when you did not want to? 4. Have you had sex when you did not want to, because you were afraid of what he would do if you refused?	
Secondary outcomes		Decrease
Past year experience of controlling behavior	4 questions (positive response to any of the questions) In the past 12 months has your partner ever 1. Kept you from seeing your friends? 2. Insisted on knowing where you are at all times? 3. Wanted you to ask permission before seeking healthcare for yourself? 4. Insulted or humiliated you in front of other people?	
Progressive attitudes to IPV	8 statements condoning physical and sexual IPV (disagree with all 8)	Increase

Note. IPV = intimate partner violence.

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savings groups (*stokvels*) among those participating in the intervention. In relation to women's empowerment, effect estimates for all 9 indicators were in the direction hypothesized.

Participation in the intervention was associated with greater self-confidence and financial confidence, as well as more-progressive attitudes toward gender norms. Compared with those in the control group, partnered women in the intervention group reported higher levels of autonomy in decisionmaking, greater valuation of their household contribution by their partners, improved household communication, and better relationships with their partners.

Those in the intervention group also reported higher levels of participation in social groups and collective action. By the end of the evaluation period, participants had organized 40 village workshops, 16 meetings with people in positions of power in their communities, 5 marches, and 2 partnerships with local institutions and had formed 2 new village committees.

### Impacts on Intimate Partner Violence

Qualitative data suggest that there was initial resistance to discussing sensitive issues such as domestic violence in the training sessions. As one participant noted: "We did not like [the sessions]. . . . We did not feel comfortable talking about such issues. In our culture it is not done that way." Older women often challenged younger women and expressed views condoning violence within marriage.

Over time, however, this resistance dissipated, as participants began to see the relevance of the training to their own lives. During the second phase of the intervention, they began to respond to gender-based violence in a range of ways within personal relationships, loan centers, and the broader community (Table 4).

Baseline data revealed that a past history of IPV was common among study participants, with one quarter having experienced either physical or sexual violence from an intimate partner in their lifetime. Among those reporting ever having experienced such violence, 71.3% had experienced physical

violence alone, and 19.1% had experienced both physical and sexual violence. Only 9.6% reported sexual violence alone.

The intervention reduced the levels of past year IPV by more than half (adjusted risk ratio [ARR]=0.45; 95% confidence interval [CI]=0.23, 0.91; Table 3). A similar magnitude of effect was also seen when only married women were included in the analysis (ARR=0.39; 95% CI=0.20, 0.72). When we examined trends over time, levels of IPV were found to consistently decrease in all 4 intervention villages at follow-up, whereas they either stayed the same or increased in the 4 control villages.

Improvements in the secondary IPV outcomes were also documented (Table 3), with the intervention group reporting less controlling behavior from an intimate partner in the past year, in spite of higher levels at baseline. Women receiving the intervention also had more progressive attitudes toward IPV than did women in the control communities.

### DISCUSSION

To our knowledge, this is the first study to use a cluster-randomized design to examine the impact of a microfinance-based structural intervention on economic well-being, empowerment of women, and IPV. After 2 years, the risk of past year physical or sexual IPV was reduced by more than half among the intervention group.

Qualitative data suggest that these reductions in violence resulted from a range of responses that enabled women to challenge the acceptability of such violence, expect and receive better treatment from partners, leave violent relationships, give material and moral support to those experiencing abuse, mobilize new and existing community groups, and raise public awareness about the need to address both gender-based violence and HIV infection.

Baseline levels of lifetime and past year physical violence noted in this study (23.0% and 8.4%, respectively) were comparable to figures previously reported in South Africa (24.6% and 9.5%).<sup>17</sup> In addition, evidence of enhanced economic well-being and consistent improvements in all 9 indicators of women's empowerment were documented among intervention participants, supporting

**TABLE 2—Participants' Experiences of Empowerment After the Intervention: Intervention With Microfinance for AIDS and Gender Equity Study, Limpopo Province, South Africa, September 2001 to March 2005**

Individual level: power within

Self confidence: "I was unable to solve problems that can be solved by a small child . . . even at church, I had never stood up and say something or lead a chorus—but now I am able to do all of these things, that's why I feel I am empowered."

Financial confidence: "It is when you can do it without looking for help from a man. You see to it, especially when your child does not have shoes."

Challenging gender norms: "To be empowered is to wear trousers. To wear trousers is a choice—women choose what to wear themselves because they want to."

Household level: power to

Autonomy in decisionmaking: "Now that I have joined SEF I can take 100 Rand and hire a car and take my child to hospital. And when their father comes back home, I tell him what happened to his kids. I do not always have to wait for him to give me money."

Perceived contribution to household: "Since I joined SEF my husband has been thanking me because I have been helping even financially in the house."

Household communication: "I am able to talk to my kids about sex. I also find it easier to talk to my partner about his other affairs without being angry and shouting at him—and I found that I make a difference because he listens."

Partner relationship: "Because we have money, the stress level has gone down and the high blood pressure is gone because we are able to help our partners with taking care of the family."

Community level: power with

Social group membership: "What I can say about my empowerment is that I was unable to speak in public. I was unable to speak in front of a crowd. But this year I was elected as a chairperson of the School Governing Body."

Collective action: "Power has to do with leadership—when a person has power he or she should be able to lead and support people to move on in life."

Note. SEF = Small Enterprise Foundation.

"In an approach to recognizing an interplay between gaining internal skills and overcoming external barriers, we drew upon a conceptual framework that included "power within" (internal qualities, such as self-confidence or critical thinking skills, that contribute to individual agency); "power to" (the creation of new opportunities without domination; factors such as the ability to make independent decisions that determine and demonstrate such agency) and "power with" (communal dimensions, such as group solidarity or collective action, which acknowledge that positive change may often be effected through individuals acting together, rather than alone).

the hypothesis that the economic and social empowerment of women can contribute to reductions in IPV.

### Limitations and Strengths

The main limitation of the study was the low number of clusters, which resulted in wide confidence intervals for some indicators. The number of villages that could be enrolled in the study was limited by logistical constraints related to the nature of the microfinance intervention. These constraints included the intervention's delivery and evaluation over a wide geographic area; the necessity of incrementally enrolling all eligible households in a village before expanding to a new village; the time needed to recruit adequate numbers of clients to a loan center before training

could begin; and the ethical imperative to not withhold the intervention from control villages for a prolonged period of time.

Furthermore, it is possible that the intervention group may have been more likely to report positive effects about a program that they valued and thus to underreport IPV at follow-up. However, as previous research has noted, although there is a general tendency for women to underreport the sensitive and often-stigmatized experience of IPV, willingness to disclose often increases with improved awareness about the definitions and extent of such abuse.<sup>45</sup> Because raising awareness about IPV was an explicit focus of IMAGE, it is likely that this focus would have encouraged increased reporting in the intervention group—a bias that would tend to underestimate the impact on IPV seen in this study.

The study also had several strengths. First, the prospective, matched, cluster-randomized design minimized recall and program placement bias, enabling unbiased estimates of effects to be obtained. This is in contrast to previous studies on microfinance and IPV, which have been constrained by a range of methodological limitations, including a lack of control groups and cross-sectional designs.<sup>27,31,46,47</sup>

Second, the inclusion of a strong qualitative research component added depth and local context to the study's understanding of empowerment and violence and provided opportunities for triangulation with quantitative findings.

Finally, the high uptake of the intervention, the consistent pattern of violence reduction observed at the village level, the congruency of this reduction with hypothesized changes in pathway variables such as economic well-being and empowerment, and the plausible mechanisms suggested by qualitative data all provide strong and complementary evidence in support of intervention causality.<sup>48–50</sup>

### Conclusions

It is likely that a number of contextual factors may affect the potential generalizability of the findings to other settings. It has been suggested that in some situations, empowering women through interventions such as microfinance may initially exacerbate the risk of violence, although there is evidence to suggest this risk may diminish over time as women spend more time in microfinance programs,<sup>35</sup> as the programs themselves become more visible and normative within communities,<sup>46,47</sup> and as broader cultural norms begin to shift.<sup>31,46</sup> Such studies have been conducted almost entirely in South Asia, and there is a need for further research in other settings, including Africa, to understand the replicability and generalizability of our findings.

Our results raise intriguing questions about the potential synergy that may be generated by deliberately integrating targeted public health interventions into development initiatives, such as microfinance. By addressing the immediate economic priorities of participants, the IMAGE intervention was able to gain access to a particularly vulnerable target group and maintain a sustained degree of contact for more than 1 year. This provided a



**TABLE 3—Intervention Impacts on Economic Well-Being, Women's Empowerment, and Intimate Partner Violence: Intervention With Microfinance for AIDS and Gender Equity Study, Limpopo Province, South Africa, September 2001 to March 2005**

	Baseline		Follow-Up			
	Intervention, No./Total (%)	Control, No./Total (%)	Intervention, No./Total (%)	Control, No./Total (%)	Unadjusted RR (95% CI)	Adjusted RR <sup>a</sup> (95% CI)
<b>Economic well-being</b>						
Estimated household asset value > 2000 rand	203/421 (48.2)	183/412 (44.4%)	223/383 (58.2)	176/359 (49.0)	1.18 (0.87, 1.60)	1.15 (1.04, 1.28)
Expenditure on shoes and clothing > 200 rand/year	...	...	246/377 (65.3)	182/339 (53.7)	1.22 (0.46, 3.23)	1.23 <sup>b</sup> (0.47, 3.20)
Had savings group membership	104/425 (24.5)	49/420 (11.7)	140/387 (36.2)	55/363 (15.2)	2.13 (0.92, 4.94)	1.84 (0.77, 4.37)
<b>Empowerment</b>						
Individual level: power within <sup>c</sup>						
More self-confidence	...	...	278/383 (72.6)	227/358 (63.4)	1.16 (0.83, 1.61)	1.15 <sup>b</sup> (0.83, 1.60)
Greater financial confidence	193/424 (45.5)	156/415 (37.6)	278/386 (72.0)	140/360 (38.9)	2.26 (0.43, 11.91)	2.25 (0.42, 12.10)
Challenging gender norms	158/423 (37.4)	201/418 (48.1)	233/381 (61.2)	154/361 (42.7)	1.54 (0.84, 2.79)	1.57 (0.87, 2.81)
Household level: power to						
Autonomy in decisionmaking	52/188 (27.7)	57/176 (32.4)	105/184 (57.1)	55/149 (36.9)	1.70 (0.72, 4.01)	1.64 <sup>d</sup> (0.85, 3.17)
Perceived contribution to household valued by partner	105/186 (56.5)	62/175 (35.4)	121/185 (65.4)	56/146 (38.4)	1.70 (1.12, 2.58)	1.55 <sup>e</sup> (0.96, 2.50)
Household communication regarding sexual matters in the past year	...	...	331/383 (86.4)	197/361 (54.6)	1.60 (1.25, 2.05)	1.58 <sup>b</sup> (1.21, 2.07)
Supportive partner relationship	135/193 (70.0)	117/178 (65.7)	212/290 (73.1)	151/248 (60.9)	1.21 (0.81, 1.80)	1.22 <sup>d</sup> (0.61, 2.53)
Community level: power with						
Greater social group membership	112/422 (26.6)	53/416 (12.7)	275/386 (71.2)	133/363 (36.6)	1.96 (1.02, 3.78)	1.85 (0.95, 3.61)
Takes part in collective action	167/407 (41.0)	146/403 (36.2)	290/383 (75.7)	124/361 (34.4)	2.22 (1.05, 4.70)	2.06 (0.92, 4.49)
<b>Intimate partner violence</b>						
Experience of past year IPV <sup>g</sup>	22/193 (11.4)	16/177 (9.0)	17/290 (5.9)	30/248 (12.1)	0.50 (0.28, 0.89)	0.45 <sup>e</sup> (0.23, 0.91)
Progressive attitudes to IPV	...	...	200/382 (52.4)	128/361 (35.5)	1.50 (0.81, 2.75)	1.49 <sup>b</sup> (0.86, 2.60)
Experienced controlling behavior by partner	67/193 (34.7)	40/178 (22.5)	95/282 (33.7)	101/242 (41.7)	0.78 (0.34, 1.82)	0.80 <sup>d</sup> (0.35, 1.83)

Note. RR = relative risk; CI = confidence interval; IPV = intimate partner violence.

<sup>a</sup>Adjusted RRs were calculated on the basis of expected number of events from a logistic regression model on individual data with independent variables including age, village pair, marital status, and baseline measure except where indicated.

<sup>b</sup>Adjustment for most similar baseline variable, because data was not collected at baseline.

<sup>c</sup>In an approach to recognizing an interplay between gaining internal skills and overcoming external barriers, we drew upon a conceptual framework that included "power within" (internal qualities, such as self-confidence or critical thinking skills, that contribute to individual agency); "power to" (the creation of new opportunities without domination; factors such as the ability to make independent decisions that determine and demonstrate such agency) and "power with" (communal dimensions, such as group solidarity or collective action, which acknowledge that positive change may often be effected through individuals acting together, rather than alone).

<sup>d</sup>No adjustment for marital status.

<sup>e</sup>Adjusted for lifetime experience of IPV by current partner at baseline.

critical opportunity rarely afforded many stand-alone health interventions.

In addition to affecting immediate program participants, such community-based interventions have the potential to influence broader change within households and communities. As our results indicated, women participating in the IMAGE intervention reported greater household communication and collective action, mobilizing their villages around a range of issues, including violence and HIV infection. There is evidence to suggest that these benefits

also reached young people in their households, resulting in greater openness and communication around sexuality and HIV issues.<sup>44</sup>

Violence against women and girls remains a major public health challenge. This study shows that initiatives aiming to empower individuals and communities can contribute to measurable health outcomes and that such empowerment can form part of a viable public health strategy.<sup>40</sup>

Sustaining these impacts and expanding beyond the local context are important challenges.

There are clearly limits to locally based programs for overcoming the political, socioeconomic, or institutional forces that maintain inequities, and empowerment strategies are more likely to be successful if integrated within macroeconomic and policy strategies aimed at creating greater equity.<sup>40,51</sup>

Many have acknowledged the interconnectivity of the Millennium Development Goals, which include commitments to reduce poverty, increase women's empowerment, and reverse the spread of HIV. Building new partnerships

**TABLE 4—Participants' Responses to Gender-Based Violence After the Intervention: Intervention With Microfinance for AIDS and Gender Equity Study, Limpopo Province, South Africa, September 2001 to March 2005**

Responses	Examples
<b>Within own relationships</b>	
Shifts in women's attitudes toward violence	"I have noticed how easy it is for people to say 'it is our culture' that I should beat my wife. Health talks have shown me that it is wrong for any man to beat up his wife."
Income-earning status and negotiating power within relationships	
Confidence to leave abusive relationships	
Reduced tension and conflicts over finances	"Now that we have money we are able to say how we feel without fearing that your husband will stop supporting you."
Better communication and conflict resolution with partners	"You can buy him cigarettes from your profit. Because of SEF's money we are experiencing fewer problems in our households." "Now we know how to talk to our husbands about sexual matters, but before they would beat you when talking about those things."
<b>Within loan centers</b>	
Speaking openly in loan center meetings about experiences of abuse	"We are able to overcome abuse when we are in SEF because we get support from the women in the groups. When you engage yourself with other women and listen to their problems that will help you to cope."
Confronting members who are contributing to other women's abuse	
Solidarity and support when women leave violent relationships	
<b>Within communities</b>	
Intervening individually when witnessing abuse	"Before the training we didn't know how to handle incidents of domestic violence. When a man abuses his wife and kids we would stare without interfering. But after training, we know exactly what to do."
Being approached by others for advice and assistance	
Sharing resources with abused women as means of offering support	
Engaging young men (e.g., organizing men's workshops on domestic violence)	"We have learnt to protect our kids against abuse. They have seen us during our march on 16 Days of Activism (to end violence against women) in the village."
Forming new community groups (e.g., village rape committee or village crime committee) to work with local authorities to address violence and support those experiencing abuse	
Raising community awareness about domestic violence (e.g., participating in marches)	

Note. SEF = Small Enterprise Foundation.

and creating synergy across health and development sectors can generate practical interventions and make meaningful progress toward attaining these important goals. ■

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#### Contributors

J. C. Kim led the development of the training component of the intervention, contributed to the design and validation of the survey instruments and data analysis, and led the writing of the article. C. H. Watts provided support to the training intervention, the design of survey tools, and the analysis. J. R. Hargreaves was responsible for the study design, field management of survey teams, data management, overall quantitative analysis, and assessment of process indicators. L. X. Ndhlovu contributed to the design and implementation of the

training intervention as well as the collection and analysis of qualitative data. G. Phetla was the team leader in South Africa for the qualitative component of the study. L. A. Morison contributed to the overall design of the study and provided major support for the statistical analysis. J. Busza provided technical support to the qualitative research team. J. D. H. Porter participated in the initial conceptualization of the intervention and its design and advised on most aspects of the study. P. Pronyk was the principal investigator of the study and project leader in South Africa and contributed to all aspects of the study.

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The study obtained approval from ethical review committees at the University of the Witwatersrand, South Africa, and the London School of Hygiene and Tropical Medicine.

#### References

1. The UN Millennium Development Goals. Available at: <http://www.un.org/millenniumgoals>. Accessed July 23, 2007.
2. Garcia-Moreno C, Jansen H, Ellsberg M, Heise L, Watts C. *WHO Multi-Country Study on Women's Health and Domestic Violence Against Women: Initial Results on Prevalence, Health Outcomes, and Women's Responses*. Geneva, Switzerland: World Health Organization; 2005.
3. Watts C, Zimmerman C. Violence against women: global scope and magnitude. *Lancet*. 2002;359:1232–1237.
4. Heise L, Garcia-Moreno C. Violence by intimate partners. In: Krug E, Dahlberg LL, Mercy JA, Zwi AVB, Lozano R, eds. *World Report on Violence and Health*.



- Geneva, Switzerland: World Health Organization; 2002: 89–121. Available at: [http://www.who.int/violence\\_injury\\_prevention/violence/world\\_report/en/full\\_en.pdf](http://www.who.int/violence_injury_prevention/violence/world_report/en/full_en.pdf). Accessed July 23, 2007.
5. Campbell JC. Health consequences of intimate partner violence. *Lancet*. 2002;359:1331–1336.
  6. Dunkle K, Jewkes RK, Brown HC, Gray GE, McIntyre JA, Harlow SD. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet* 2004; 363:1415–1421.
  7. Guedes A. *Addressing Gender-Based Violence from the Reproductive Health/HIV Sector: A Literature Review and Analysis*. Washington, DC: Bureau for Global Health, USAID; 2004.
  8. Chalk R, King P, eds. *Violence in Families: Assessing Prevention and Treatment Programs*. Washington, DC: National Academy Press; 1998.
  9. Usdin S, Scheepers E, Goldstein S, Japhet G. Achieving social change on gender-based violence: a report on the impact evaluation of Soul City's fourth series. *Soc Sci Med*. 2005;61:2434–2445.
  10. Bott S, Morrison A, Ellsberg M. *Preventing and Responding to Gender-Based Violence in Middle and Low-Income Countries: A Global Review and Analysis*. Washington, DC: The World Bank; 2005. World Bank Policy Research Working Paper 3618. Available at: [http://www.preventgbv africa.org/Downloads/WorldBank\\_EllsBottMorrJune05.pdf](http://www.preventgbv africa.org/Downloads/WorldBank_EllsBottMorrJune05.pdf). Accessed July 15, 2007.
  11. Ramsay J, Rivas C, Feder G. *Interventions to Reduce Violence and Promote the Physical and Psychosocial Well-Being of Women Who Experience Partner Violence: A Systematic Review of Controlled Evaluations*. London, England: Queen Mary's School of Medicine and Dentistry; 2005. UK Department of Health Report. Available at: [http://www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyAndGuidance/DH\\_4126266](http://www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyAndGuidance/DH_4126266). Accessed July 15, 2007.
  12. Heise L, Ellsberg M, Gottemoelle M. *Ending Violence Against Women*. Baltimore, Md: Johns Hopkins University School of Public Health; 1999. Series L, No. 11 Population Reports. Available at: <http://www.inforhealth.com/pr/111/violence.pdf>. Accessed July 15, 2007.
  13. Jewkes R. Intimate partner violence: causes and prevention. *Lancet*. 2002;359:1423–1429.
  14. Rose D, Charlton KE. Prevalence of household food poverty in South Africa: results from a large, nationally representative survey. *Public Health Nutr*. 2003;5:383–389.
  15. Collinson MA, Tollman SM, Kahn K, Clark SJ, Garenne M. Highly prevalent circular migration: households, mobility and economic status in rural South Africa. In: Tienda SMTM, Preston-Whyte E, Findlay SE, eds. *African Migration in Comparative Perspective*. Johannesburg, South Africa: University of the Witwatersrand Press; 2006.
  16. Lestme-Jefferys J. The labour market. In: Udjo E, ed. *The People of South Africa Population Census 1996*. Pretoria, South Africa: Statistics South Africa; 2000:47–61.
  17. Jewkes R, Levin J, Penn-Kekana L. Risk factors for domestic violence: findings from a South African cross-sectional study. *Soc Sci Med*. 2002;55:1603–1617.
  18. Microcredit Summit Campaign. *State of the Microcredit Summit Campaign Report 2005*. Washington, DC: Microcredit Summit Campaign; 2005.
  19. Schuler SR, Hashemi SM. Credit programmes, women's empowerment and contraceptive use in rural Bangladesh. *Stud Fam Plan*. 1994;25:65–76.
  20. Hashemi S, Schuler S, Riley I. Rural credit programmes and women's empowerment in Bangladesh. *World Dev*. 1996;24:635–653.
  21. Cheston S, Kuhn L. Empowering women through microfinance. In: Harris SD, ed. *Pathways Out of Poverty: Innovations in Microfinance for the Poorest Families*. Bloomfield, Conn: Kumarian Press; 2002:167–228.
  22. Hashemi S, Syed M, Schuler S, et al. Rural credit programmes and women's empowerment in Bangladesh. *World Dev*. 1996;24:635–653.
  23. Khandker SR. *Fighting Poverty With Microcredit: Experience in Bangladesh*. New York, NY: Oxford University Press; 1998.
  24. Schuler S, Hashemi S, Riley A. The influence of women's changing roles and status in Bangladesh's fertility transition: evidence from a study of credit programmes and contraceptive use. *World Dev*. 1997;25: 563–575.
  25. Goetz AM, Sen Gupta R. Who takes credit? Power and control over loan use in rural credit programmes in Bangladesh. *World Dev*. 1996;24:45–63.
  26. Mayoux L. Women's empowerment and microfinance programmes: strategies for increasing impact. *Dev Pract*. 1998;8:235–241.
  27. Kabear N. Conflicts over credit: re-evaluating the empowerment potential of loans to women in rural Bangladesh. *World Dev*. 2001;29:63–84.
  28. Schuler SR, Hashemi SM, Riley AP, Aldter S. Credit programs, patriarchy, and men's violence against women in rural Bangladesh. *Soc Sci Med*. 1996;43:1729–1742.
  29. Jejeebhoy SJ, Cook RJ. State accountability for wife-beating: the Indian challenge. *Lancet*. 1997;349: S110–S112.
  30. Schuler SR, Hashemi SM, Badal SH. Men's violence against women in rural Bangladesh: undermined or exacerbated by microcredit programmes? *Dev Pract*. 1998;8:148–157.
  31. Koenig MA, Ahmed S, Hossain MB, Khorshed Alam Mozumder ABM. Women's status and domestic violence in rural Bangladesh: individual- and community-level effects. *Demography*. 2003;40:269.
  32. Hargreaves JR, Kim JC, Makhubele MB, et al. The Intervention with Microfinance for AIDS and Gender Equity study (IMAGE study): an integrated community-randomised trial of a structural intervention to prevent HIV and gender-based violence in South Africa. Protocol number 03PRT/24. The Lancet Protocol Reviews. Available at: [http://web.wits.ac.za/NR/rdonlyres/17AF0772-48DA-428D-9D23-45EBB6F55158/0/IMAGE\\_Study\\_Protocol\\_The\\_Lancet.pdf](http://web.wits.ac.za/NR/rdonlyres/17AF0772-48DA-428D-9D23-45EBB6F55158/0/IMAGE_Study_Protocol_The_Lancet.pdf). Accessed July 15, 2007.
  33. Yonus M. The Grameen Bank. *Sci Am*. 1999;281: 114–119.
  34. UNFPA, Microcredit Summit Campaign. *From Microfinance to Macro Change: Integrating Health Education and Microfinance to Empower Women and Reduce Poverty*. New York, NY: Microcredit Summit Campaign and the United Nations Population Fund; 2006.
  35. Ahmed SM. Intimate partner violence against women: experiences from a woman-focused development programme in Matlab, Bangladesh. *J Health Popul Nutr*. 2005;23:95–101.
  36. RADAR. *Social Interventions for HIV/AIDS: Intervention With Microfinance for AIDS and Gender Equity*. Acornhoek, South Africa: Acornhoek School of Public Health, University of the Witwatersrand; 2002. IMAGE study intervention monograph 2. Available at: [http://hermeswits.ac.za/www/Health/PublicHealth/RADAR/PDF%20files/Intervention\\_monograph\\_pics.pdf](http://hermeswits.ac.za/www/Health/PublicHealth/RADAR/PDF%20files/Intervention_monograph_pics.pdf). Accessed August 7, 2007.
  37. Friedman SR, O'Reilly KR. Sociocultural interventions at the community level. *AIDS*. 1997;11(suppl A): s201–s208.
  38. Pronyk PM, Kim JC, Hargreaves JR, et al. Microfinance and HIV prevention—perspectives and emerging lessons from a community randomized trial in rural South Africa. *Small Enterprise Dev*. 2005;16:28–38.
  39. Alsop R, Heinsohn N. *Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators*. Washington, DC: World Bank; 2005. World Bank policy research working paper 3510.
  40. Wallerstein N. *What is the Evidence on Effectiveness of Empowerment to Improve Health?* Copenhagen, Denmark: WHO Regional Office for Europe; 2006. Health Evidence Network Report. Available at: <http://www.euro.who.int/Document/E88086.pdf>. Accessed July 20, 2007.
  41. Malhotra A, Schuler SR, Boender SR. *Measuring Women's Empowerment as a Variable in International Development*. Washington, DC: Gender and Development Group, The World Bank; 2002. Available at: <http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf>. Accessed July 15, 2007.
  42. Mosedale S. Assessing women's empowerment: towards a conceptual framework. *J Int Dev*. 2005;17: 243–257.
  43. Ndhlovu L. *Empowerment as Seen Through the Eyes of Rural Women Participating in the IMAGE Study in South Africa* [MPH thesis]. Johannesburg, South Africa: School of Public Health, University of the Witwatersrand; 2006.
  44. Pronyk PM, Hargreaves JR, Kim JC, et al. Effect of a structural intervention for the prevention of intimate partner violence and HIV in rural South Africa: results of a cluster randomized trial. *Lancet*. 2006;368:1973–1983.
  45. World Health Organization. *Putting Women First: Ethical and Safety Recommendations for Research on Domestic Violence Against Women*. Geneva, Switzerland: World Health Organization; 2001. Doc.WHO/EIP/GPE/99.2.
  46. Naved RT, Persson LA. Factors associated with spousal physical violence against women in Bangladesh. *Stud Fam Plan*. 2005;36:289–300.
  47. Bates LM, Schuler SR, Islam F, Islam MK. Socio-economic factors and processes associated with domestic violence in rural Bangladesh. *Int Fam Plan Perspect*. 2004;30:190–199.
  48. Sorenson G, Emmons K, Hunt MK, Johnston D. Implications of the Results of Community Intervention trials. *Annu Rev Public Health*. 1998;19:379–416.
  49. Schulz KF, Grimes DA. Sample size calculations in randomised trials: mandatory and mystical. *Lancet*. 2005;365:1348–1353.
  50. Habicht J, Victora C, Vaughan J. Evaluation designs for adequacy, plausibility and probability of public health programme performance and impact. *Int J Epidemiol*. 1999;28:10–18.
  51. Kim J, Watts C. Gaining a foothold: tackling poverty, gender inequality and HIV in Africa. *BMJ*. 2005; 331:769–772.