

Group-microfinance and health promotion among the poor: six-year process evaluation of the Intervention with Microfinance for AIDS and Gender Equity (IMAGE) in rural South Africa

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Abstract

Background

Microfinance can address structural barriers to health by fostering economic and social empowerment among poor women and their households. Microfinance institutions may also host conventional health promotion activities. The Intervention with Microfinance for AIDS and Gender Equity combined group-based microfinance with gender and health-awareness training and community mobilisation in South Africa. A process evaluation undertaken during a trial (2001-4) and subsequent scale-up (2005-7) examined: whether IMAGE was accessible and acceptable to intended clients; and whether it was feasible to deliver.

Methods

Qualitative data on observation of intervention delivery (134 hours), focus group discussions (16) and in-depth interviews (128) with clients and staff. Quantitative data from attendance registers, questionnaires and financial records.

Findings

High recruitment and repayment rates and low dropout from microfinance were facilitated by a well-established delivery model. Attendance at compulsory training sessions was high (median 8/10 sessions attended). Training was acceptable to most clients; only a minority reported concerns about programme content. During community mobilisation: many clients shared information; some took part in collective action; others experienced barriers to participation. Initially IMAGE deployed a linked-partnership between a microfinance agency and university-affiliated training team. This model was considered unsustainable so a parallel-delivery model was tested during scale-up. The

microfinance partner assumed a greater role managing training and community-mobilisation. However, this model was also deemed unfeasible for future work.

Interpretation

IMAGE was accessible and acceptable to clients, supporting the plausibility of the trial findings. Linked-partnership between specialist microfinance and service-oriented health organisations may be a feasible model for delivering similar interventions.

Background

Health promotion can encompass medical, educational and social interventions, and can aim to empower individuals and/or foster healthier social and physical environments.¹

Interventions addressing the latter are often termed structural or environmental interventions.²⁻⁶ Microfinance can promote various health outcomes through poverty reduction and female empowerment.⁷⁻¹¹ Microfinance institutions (MFIs) can also host more conventional health promotion activities such as health education and community mobilisation.

While many believe combining microfinance and more conventional health promotion activities is a promising approach to improving health,¹²⁻¹⁵ little is known about: whether it is feasible to package microfinance with other activities; what additional activities should comprise; whether combined packages reach their intended clients and are acceptable to them; and, what are appropriate models of management. Many MFIs emphasise specialisation in credit delivery, reflecting a concern that providing additional services might undermine financial sustainability.^{16,17}

The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) combines microfinance, gender-awareness and HIV training, and community-mobilisation in rural South Africa (Panel 1¹⁰). Briefly, the microfinance component delivers loans to groups of five women, who meet fortnightly within a village-based loan centre. Training involves a participatory gender and HIV/AIDS curriculum called 'Sisters for Life' (SFL). Community mobilisation aims to facilitate clients in local action projects led by clients nominated by their peers as 'natural leaders'. IMAGE theorises that the combined influence of these components on poverty alleviation, female empowerment and community development

can deliver health benefits to clients, their households and communities in a setting where poverty, gender inequalities and intimate partner violence (IPV) fuel the HIV epidemic.⁶ A cluster-randomised trial (2001-4) reported a significant reduction in intimate partner violence (IPV) among IMAGE clients compared with controls but found less evidence of any impact on condom use or HIV incidence among young people in clients' households or communities.¹⁰

We conducted a process evaluation of IMAGE over six years covering the trial and subsequent scale-up. Process evaluations complement outcome evaluations of complex interventions by examining delivery and uptake, aiding interpretation of outcome findings and informing potential replication.¹⁸ We set out to answer two research questions: was IMAGE accessible and acceptable to its intended clients?; and was it feasible for the providers of IMAGE to deliver the intervention as intended during each phase? Our analysis sought to identify contextual factors promoting or hindering delivery and uptake. In discussing our findings we comment on whether they might help explain the observed outcomes in the IMAGE trial and their relevance for potential replication of IMAGE in other settings.

Methods

Setting

IMAGE was delivered from 2001-7 in South Africa's impoverished but rapidly developing Limpopo province.^{19,20} The Small Enterprise Foundation (SEF) delivered microfinance while a team from the Rural AIDS and Development Action Research (RADAR) programme of the University of Witwatersrand delivered SFL and facilitated community mobilisation. The trial involved 430 women from four villages being enrolled through one SEF branch ("A"). Following the trial, a scale-up phase recruited more than 3000 clients from 115 villages via two SEF branches ("A" and "B") by mid-2007 (Figure 2).

Data collection

During the IMAGE trial we collected prospective qualitative data on delivery and uptake comprising: researcher notes on 134 hours of observation of intervention delivery; reflective diaries of four staff delivering the intervention over 18 months; focus-group discussions with clients (16); and in-depth interviews with clients (15) and clients who dropped out of the programme after completing a loan cycle (19).

Quantitative data were generated during this phase via: attendance registers; structured client questionnaires conducted two years after enrolment; and financial records. Data were collected on: microfinance recruitment and dropout; attendance, acceptance and participation in SFL training sessions; and recruitment of "natural leaders" and participation in community mobilisation.

During the scale-up, we continued to collect prospective qualitative data on the delivery and uptake of IMAGE, conducting 24 new interviews with randomly selected clients from both branches. However, it was not possible to collect detailed quantitative data during this phase. Instead, as scale-up began we sought to better document the views of IMAGE providers because these were seen as particularly important given emerging changes in the model used to manage IMAGE in the scale-up. We conducted 7 interviews with RADAR managers (5 individuals), 33 with RADAR fieldstaff (10), 16 with SEF managers (12) and 14 with SEF fieldstaff (14). Since many providers were involved throughout both phases we were able to collect both prospective data on the scale-up and retrospective reflections on the trial phase.

Data analysis

Qualitative data were transcribed verbatim from digital recordings or other formats and, where necessary, translated independently by two researchers from the local language of Sepedi to English. Our analysis took an interpretivist approach, seeking to understand how research participants understood their experiences.²¹ Interview transcripts were analysed using N6 (QSR International).²² The research questions informed initial code definitions and two researchers coded the transcripts.²³ Transcripts were coded a second time, each researcher developing codes inductively from the data, ensuring our analysis incorporated the 'top-down' structure of research questions and the 'grounded' voices of informants.²⁴ We have included anonymised quotes illustrating relevant themes, each ascribed to one of five groups from whom data were collected, each of these representing more than five individuals: clients; SEF fieldstaff; RADAR fieldstaff; SEF managers; or RADAR managers.

Quantitative data were analysed using Stata version 9. An estimate of clients reached by IMAGE was based on the number of microfinance centres completing SFL sessions, assuming 48 clients participating per centre at some point during delivery of SFL and 56% of these attending seven or more sessions (data available on request). The monthly dropout rate was calculated as the proportion of clients completing loan repayments in that month who did not apply for a new loan.²⁵ Chi² tests were used to describe statistical comparisons between socio-demographic groups.

Ethical approval was granted for the IMAGE trial and process evaluation by ethics committees at the London School of Hygiene & Tropical Medicine and the University of the Witwatersrand.

Results

Was IMAGE accessible and acceptable to its intended clients?

During the trial, clients were recruited to the microfinance programme at the rate planned with 430 clients joining in just under 15 months. Young men were not eligible to be clients, while women under 35 years made up a minority of IMAGE clients (27.1%, Table 3). As with SEF's wider programme, very few clients risked defaulting on loan repayments: unrepaid debt from branch "A" totalled less than 100USD from some 290,000USD disbursed. Average monthly drop-out rate in the first 18 months of delivery (June 2002 – Dec 2004) was 11.1%, somewhat lower than for SEF's overall programme (16.2%), although the rate later approached this overall average. Cumulatively, 134/428 clients (31.3%) interviewed at two-year follow-up were no longer SEF members. Overall, microfinance performance in the trial was considered good even by SEF's high standards; staff working on IMAGE were among the highest performing across SEF. Factors promoting this included: SEF's strong delivery model; high-quality fieldstaff; rapid economic development in the area; and involvement in IMAGE (quote 1).

[1] Every year we do award the best [microfinance fieldstaff]. It is a very competitive award and all [three] from [branch A] came first. I think it was unbelievable and actually remarkable. I think the fact that they came first was related to the fact that they were part of the IMAGE project. I do not know whether it was something that they were doing on a day to day basis or was it something that had to do with their personalities or their own abilities. **(SEF manager)**

During the trial, attendance and participation in SFL was high, with clients attending a median of 8/10 SFL sessions (IQ range 5-10), facilitated by attendance being compulsory for loan recipients. Of all potential sessions on which data were available 2790/3986 (70.0%) were attended, 532 (13.4%) were missed due to non-attendance by

current members, while 277 (7.0%) were missed by individuals who had left SEF and 387 (9.7%) by individuals who had not yet joined by that session. Financial pressures, particularly those associated with illness or death in the family, were the main reason cited for dropout in both qualitative (quote 2) and quantitative data (50/134, 37.3% of dropouts cited trouble keeping up with repayments; 22/134, 16.4% death or illness in the household). There was little evidence that clients left the programme because of the added SFL sessions; only 4/134 (3.0%) of dropouts citing this. Attendance was lowest among women under 35 years of age because these were most likely to drop out of the programme (Table 3).

[2] Because of poverty I used the loan meant for business to buy food, pay school fees and uniforms for children [...and ended up with no money to buy stock.] **(Client)**

Clients valued SFL during the trial phase (Table 3), particularly the focus on communication, new information, social support and increasing confidence (quote 3).

[3] My children are beginning to understand me better and I now know how to live with them peacefully. They slowly are opening up. Hence I am grateful of health talks because they have helped me. My children are listening to me. **(Client)**

SFL trainers were regarded as skilled facilitators. A minority of clients: expressed concerns about the length of the sessions; found the content of some sessions to be inappropriate or confusing; found the trainers too young for a facilitative role; or did not think SFL should be obligatory (quote 4).

[4] At some point I even told the facilitators that I did not join SEF for health education but for money. "Where does all this health education stuff come from?", I asked. **(Client)**

Most women felt able to participate in the sessions (Table 3). Factors cited as promoting participation included: recruiting trainers locally; emphasising personal reflection and intensive mentoring for trainers; client perception that microfinance staff supported SFL; and the successful functioning of the microfinance component. Participation was occasionally undermined by SEF clients being unaware that the SFL and community mobilisation components were a compulsory condition of membership when they joined.

Community mobilisation during the trial commenced with additional training for a cadre of 37 “natural leaders” recruited within centres (Table 3). This training was a source of confidence for clients who took part (quote 5), but there were barriers to attendance such as sickness, constraints from husbands, childcare and the pressures of running a business (quote 6).

[5] The power that those women have after being identified as Natural Leaders; they went into training and I mean they were very different – that week changed them quite a lot. And I have seen them in action in the centre meetings after they return from the training. **(Client)**

[6] **Client #1 (older):** I have recently had an operation and I think it is not going to be healthy for if I expose myself for winds out there. The winds will make me sick. Another thing is I am taking care of my school-going children.
Client #2 (younger): I am staying with my husband. Unfortunately I cannot go.
Client #3 (older): I would love to but I have a problem because I will have [to get] someone who can help to sell my stuff so that when we get back I will be able to repay my loan.

This meant that some women regarded as potential natural leaders were unable to participate. Following the training, “natural leaders” returned to lead their centres in community mobilisation. During community mobilisation, acts of individual information-

sharing (e.g. women discussing previously taboo topics such as HIV and IPV with household members) were widespread and were said to support a growing sense of empowerment (quote 7).

[7] As parents we were not taught to talk about sexual matters with our children. But the scourge of the virus is challenging every parent to open up and talk. It is difficult but it is something we have to face head on. As women and mothers and grandmothers we have the responsibility to protect our children against the virus. **(Client)**

In addition, collective action was documented such as women organising workshops, meetings with community leaders and marches, and forming new committees or partnerships with local organisations (quote 8).

[8] It was a long process because we consulted organizations in the community for advices and support. We then had to talk to the members of the community. It is difficult because people have different views and some are criticizing us. It was tough but we have learnt many things during the organization of the march. The important lesson is that women need to speak with one voice. It is only then that people take us seriously and listen. **(Client)**

SFL trainers worked for 6-12 months with natural leaders and their centres to help plan and implement collective action addressing priorities identified by clients. The extent to which clients led collective action varied: some centres were pro-active while others required ongoing support from SFL trainers (quote 9).

[9] Well, you have to empower them. If you do everything for them, they get used to the fact that you do it. And if you don't pitch, they say, "Oh SFL field staff's not here." But if you empower them to go ahead without you... means, if you go to a meeting, make sure they contribute more than you do. **(RADAR fieldstaff)**

Collective action brought some women into new roles in their community and improved these clients' confidence to engage with local structures and speak out. However,

barriers limited some womens' ability to participate, such as: other family and community responsibilities; lack of monetary incentives; need to prioritise running a business (quote 10); and social dynamics such as maintenance of privacy and respect.

[10] [Community mobilisation] takes us lot of time and energy to do it. Health education is very good but it cost us a lot if we are expected to go out and teach other people. We can teach our children and friends but I find difficult that I have leave my business and run around.
(Client)

Some alterations were made to improve intervention delivery during the scale-up including: clearly informing clients about both programmes when they joined; SFL staff providing extra training sessions to meet additional client needs; engaging staff across both organisations in activities to promote collaboration; and, creating a field manual to guide community mobilisation. Various challenges to intervention delivery during scale-up may have negatively influenced the quality or quantity of the intervention received by some clients. These included: a shift to within-team mentoring by trainers rather than external consultants; changes to microfinance procedures that undermined attendance in branch "B"; and, low SFL staff morale as a result of management-structure changes intended to promote feasibility (as discussed in the next section). Despite these challenges, qualitative data suggested that clients continued to value the intervention.

Was it feasible for the IMAGE providers to deliver the intervention as intended?

RADAR initiated the partnership and led the design of SFL and community-mobilisation prior to the trial. Despite previously being reluctant to engage in collaborations, SEF managers were keen to collaborate with RADAR because: SEF was approaching operational financial sustainability; they were concerned about the impact of HIV/AIDS

on clients and staff; they were impressed by RADAR; SEF had been offered funding to address HIV/AIDS but did not have plans for using these; the proposed IMAGE model was perceived as low-risk since RADAR would develop and manage the new components (quote 11); the programme was to be implemented in a new branch, the establishment of which could partially draw on the HIV/AIDS funding; and, no major changes to SEF's delivery model were proposed (quote 12).

[11] The cost was a big issue. That was the main issue. And we realised that it would not add any cost to our program, that all the people that will be involved [SEF and SFL staff] would be fully paid from [RADAR]. **(SEF manager)**

[12] We did not want to disrupt SEF's core activities- microfinance is a tough business so we didn't want to disturb what they were doing and we just wanted to make sure that our relationship with them was smooth. **(RADAR manager)**

During the trial, RADAR managed SFL and community mobilisation; recruiting, training, paying and performance-managing SFL fieldstaff. Meanwhile, SEF managed the microfinance. As discussed above, this model saw the delivery of the intervention to some 430 clients. Factors promoting feasible delivery during the trial included: RADAR's efforts to raise awareness within SEF of the significance of poverty and IPV for the HIV epidemic; intensive training for SFL staff focusing on self-reflection and personal development provided by an external expert in the field; and mentoring and on-going support provided by RADAR management. However, a key challenge to feasible delivery during this phase arose from the different cultures of each organisation, RADAR being smaller and more employee-focused, reflected in different working conditions (e.g. SFL trainers used cars while SEF staff used public transport).

Following the trial, enthusiasm for IMAGE led the partners to plan a scale-up. However, RADAR managers doubted the replicability or sustainability of a university-affiliated team leading training and community mobilisation so the organizations decided to explore integrating the management of SFL and community mobilisation within SEF (quote 13).

[13] I think SEF would have been quite happy for us to continue [this way, but] it makes it less replicable in other African settings for example, you won't always have a RADAR there so all sorts of things were raised by both of us and we were saying no, in the scale-up let's try and keep it within SEF. **(RADAR manager)**

However, SEF's core mission of credit delivery within financial sustainability remained central. Because of this, a complex management structure emerged where SEF would be responsible for management and performance appraisal of SFL training staff, while RADAR would administer salaries and support staff recruitment, training, mentoring and quality assurance. A former SFL trainer was appointed to manage the training team and champion IMAGE within SEF. A SEF operations manager was to coordinate the programme with SEF's core business. Working policies of SEF and SFL fieldstaff were aligned (SFL trainers used public transport and were subject to rigorous productivity targets) (quote 14). Various activities aimed to promote collaboration (e.g. the SEF managing director facilitated joint workshops).

[14] For me one of the things is that we have got to see if we can get the productivity of the training up, if we are going to have the integration thing then we have got to have the organisational cultures have got to be close, and I worry that they are not. **(SEF manager)**

The emerging model was not without challenges. At times inter-agency communication was undermined by lack of clarity about whether SEF's role was to liaise with or line-manage the SFL team. The latter role was regarded by some as problematic since SEF did not administer SFL salaries or lead areas such as quality assurance. These difficulties were compounded at critical points by turnover and serious illness among staff responsible for SFL coordination and the emergence of problems with attendance in branch "B". Some tensions in the division of responsibilities within the partnership began to show and this negatively affected SFL staff morale.

Despite these challenges, SEF and RADAR managers remained enthusiastic about the combined intervention throughout the scale-up and were committed to further work. Both thought a new model was essential however (quote 15). The model being planned in late 2007 was for SFL and community mobilisation to be delivered alongside SEF's microfinance by a team based in a separate service-oriented organisation itself responsible for acquiring external funding, employing trainers and managing productivity and quality (quote 16).

[15] I think the more we worked with SEF, the more they felt they need to concentrate on what they do best. And [SEF management] felt that [they] want SFL to work with the women but [don't] want to manage it. **(RADAR fieldstaff)**

[16] So we have made the decision that ideally Sisters for Life should go into a separate NGO [...] We would still like to carry on in very much the same way we were doing in the trial [...] The integration definitely did not work. It is not a question. So will it work [if we are not managing SFL]. We believe so. **(SEF manager)**

Discussion

IMAGE is a complex intervention combining microfinance, gender and HIV/AIDS training and community mobilisation in order to address the social determinants of IPV and HIV. A cluster-randomised-trial in rural South Africa suggested that the intervention was a highly promising approach for IPV prevention among clients directly exposed, though provided little evidence for an indirect impact on HIV-risk among young people in clients' households and communities.¹⁰ We conducted a process evaluation evaluating the accessibility, acceptability and feasibility of IMAGE delivery to aid interpretation of these findings and inform potential replication.

During the trial (2001-4) the microfinance and training components of IMAGE were generally accessible and acceptable to clients. Community mobilisation saw many individual clients share information with others, while some organised collective action. However, barriers to widespread participation were also noted. Qualitative data from the scale-up phase (2005-7) suggested these patterns were largely repeated, although some additional challenges for maintaining quality were encountered.

Views on a feasible delivery model for IMAGE changed during the scale-up. During the trial IMAGE involved a "linked" delivery model where financial services and non-financial services were delivered by two independent organisations to the same clients.²⁶ However, the university-affiliated team's doubts about the sustainability and replicability of this model led to another model being tried in scale-up whereby aspects of management of the training and community mobilisation were taken on by the microfinance partner. Under this arrangement productivity targets were exceeded, clients

valued the intervention and management enthusiasm remained high. However, this model raised its own challenges and fieldstaff morale dipped at times. These factors and SEF's commitment to focusing on sustainable credit delivery informed a view that a "parallel" model, with health components being delivered by specialist staff housed within the microfinance organisation²⁶, was also unfeasible. A new linked model was being planned for future work.

Our evaluation necessarily had limitations. We did not quantitatively assess the accessibility or acceptability of training or community mobilisation during the scale-up phase and relied on qualitative data to support our conclusions in this regard. Further, although most programme staff were interviewed, in-depth interviews were conducted with a small sample of clients and these may have been unrepresentative. Interviews might have focused on problems more than successes and these may be overemphasised in our analysis. Recognising these limitations we discuss the implications of our findings for two key issues: understanding the IMAGE trial outcome findings and its potential replication.

First, our finding that IMAGE was largely delivered as planned during the trial, with high levels of client satisfaction and participation, lends plausibility to the primary outcome finding of a reduction in IPV among direct programme clients^{10,27}. Our data support previous work where we have documented, using both qualitative and quantitative data, pathways through which this impact might have been achieved.²⁸ While we cannot directly explain why there was less evidence of indirect intervention effects with respect to condom use and HIV incidence among young people in clients' households and communities, we offer three potential explanations informed by our findings.

First, while microfinance and SFL training were delivered as planned these aspects did not directly reach large numbers of young people. Changes among household members were hypothesised primarily through a process of diffusion,²⁹ which may have been overly ambitious. Second, while increased communication between IMAGE clients and young people came to be seen as an important aspect of community mobilisation^{10,30}, this may not have been sufficient to instigate sexual behaviour change over a short follow-up period. Third, while the intervention met its target of enrolling 10-20% of eligible households in a village, this may have been insufficient to generate community-wide effects. In South Asia, where indirect effects of microfinance on contraceptive use have been observed, nearly half of village households enrol in the programme.²⁹ While many IMAGE clients undertook information sharing that overcame social norms³¹, they also experienced barriers to engaging in collective action. Clients' status as poor women may also have limited their influence. It seems plausible that barriers to collective action undermined IMAGE's capacity to affect young people's behaviour and community HIV-incidence.

Regarding the potential for an IMAGE model to be replicated in other settings, the partnership was initially driven by a university-affiliated team working alongside a successful microfinance organisation. Other attempts by HIV/AIDS researchers to partner with microfinance and offer credit alongside other activities have been somewhat unsuccessful^{32,33}. The reasons for the failure of these projects remain unclear but may include the economic climate in Zimbabwe (both projects cited) and the targeting of young women at high-HIV-risk who may not make good microfinance clients. In contrast, IMAGE involved a well developed MFI working in a rapidly developing economic environment. The decision not to change SEF's microfinance delivery model appears to have been key in supporting the deployment of IMAGE, although, as described, the fact

that young men and women were under-represented likely contributed to the lack of impact on HIV-risk among this group.

While examples of linked delivery models are rare in the microfinance literature, microfinance institutions that have used a parallel model to add health training to existing services have had success. Bangladesh Rural Advancement Committee (BRAC) has pioneered a parallel model for “credit-plus”. However, some supporters of credit and education from within the sector have argued that a “unified” approach, exemplified by Freedom from Hunger’s model of microfinance and HIV/AIDS education in Uganda that successfully deploys a single staff member to deliver both credit and education, represents the best approach since “parallel delivery is unsustainable due to grant dependency”.²⁶ Proponents of the parallel approach recognise however that it can lead to the microfinance or the training components suffering in quality.²⁶ IMAGE quality was generally well maintained even during the scale-up where prioritising quality assurance was sometimes challenging.

While HIV/AIDS and IPV researchers remain interested in the potential for MFIs to meet the needs of their target groups, many MFIs have come to see specialisation as key to the success of their programmes. Elsewhere, we have documented the concerns of MFIs about their capacity to take on an IMAGE approach.³⁴ The IMAGE experience suggests that with good communication between partners, linked partnerships between specialist service-delivery organisations may be an effective model for delivering integrated microfinance and health activities to poor clients.

Tables and Figures

Table 1: IMAGE Intervention details

Component	Key features
Poverty-focused microfinance	<p>Implemented by Small Enterprise Foundation (SEF), an established South African microfinance institution. By June 2007, SEF had disbursed 364,827 loans for self-employment since inception to the value of ZAR 467million (USD 57.7 million). Bad debt write-offs amounted to 0.7% of the cumulative amount disbursed.³⁵</p> <p>Microfinance processes facilitated by one fieldworker in each village</p> <ul style="list-style-type: none"> - Identification of the poorest households using participatory wealth ranking - Recruitment and group formation for mutual credit guarantee and support (one group = 5 women) - Individual borrowing and repayment of loans over 10/20 week cycles - Fortnightly centre meetings (one centre=c.40 women in 8 groups) - Ongoing business assessment and impact monitoring
“Sisters for Life” gender and HIV/AIDS awareness training	<p>Developed and initially implemented by Rural AIDS and Development Action Research (RADAR), a programme of the School of Public Health at the University of the Witwatersrand, South Africa.</p> <p>“Sisters for Life” facilitated by a team of trainers working in all villages. Ten sessions conducted within fortnightly centre meetings (c.6 months)</p> <ol style="list-style-type: none"> 1. <i>Introductions</i> 2. <i>Reflecting on Culture</i> 3. <i>Gender Roles</i> 4. <i>Women’s Work</i> 5. <i>Our Bodies, Our Selves</i> 6. <i>Domestic Violence</i> 7. <i>Gender and HIV</i> 8. <i>Knowledge is Power</i> 9. <i>Empowering Change</i> 10. <i>Way Forward</i>
Support for community mobilisation	<p>Also facilitated by Sister for Life trainers.</p> <ul style="list-style-type: none"> - Election of “natural leaders” from within centres (up to 5 per centre) - External training for natural leaders - Development of centre-based action plans responding to local priority issues - Six-to-nine months of continued facilitation by training team

Figure 2: Implementation of IMAGE intervention in rural South Africa 2001-7

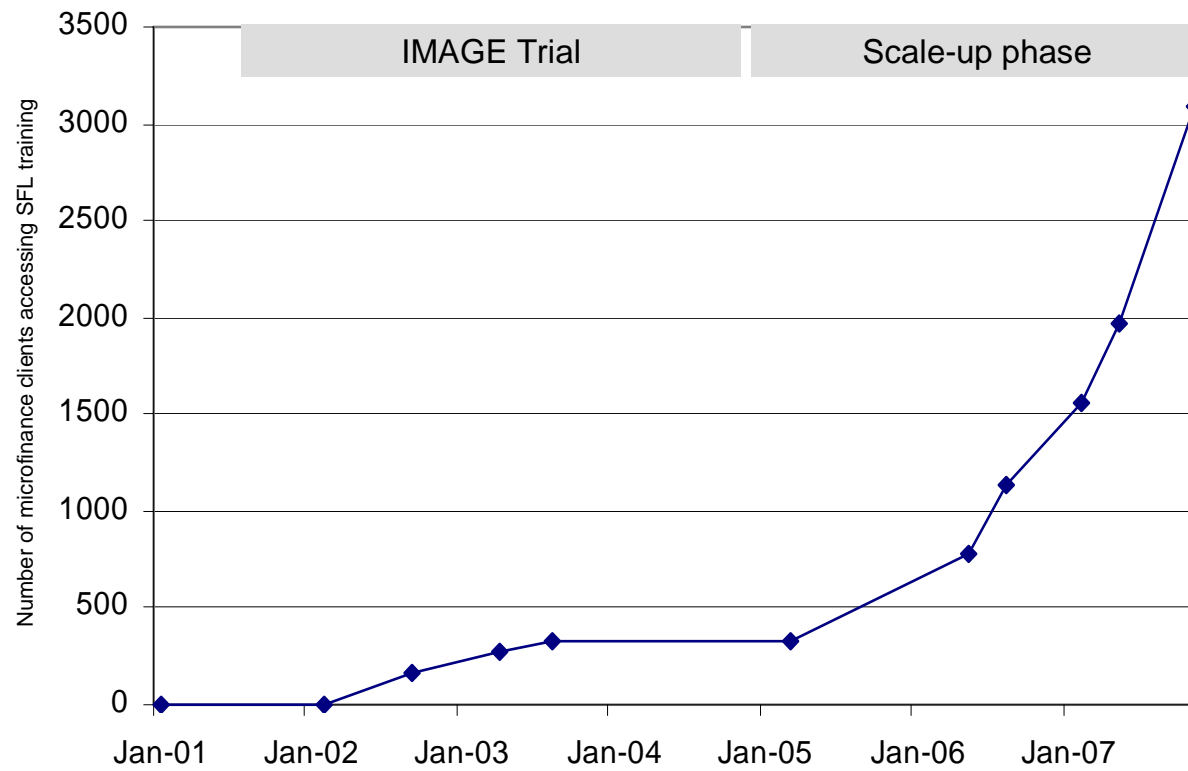


Table 3: Sociodemographic profile of IMAGE clients, drop-outs, attenders and natural leaders and responses to IMAGE

Characteristic	Grouping	All recruited clients	Programme drop-out by 2 years	Attended more than 7 SFL sessions	Became a "natural leader"	Agree or strongly agree with the following statements		
						"I could participate in SFL" [#]	"The training has had a major impact on my life"	"I participated in community mobilisation" [^]
Age group	Under 35 years	116 (27.1%)	53/103 (51.5%)*	60/104 (57.7%)*	7/103 (6.8%)*	78/95 (82.1%)*	88/95 (92.6%)	70/101 (69.3%)*
	35-44 years	154 (36.0%)	45/138 (32.6%)*	93/147 (63.3%)*	21/139 (15.1%)*	122/136 (89.7%)*	128/136 (94.1%)	112/135 (83.0%)*
	More than 45 years	158 (36.9%)	36/143 (25.2%)*	111/155 (71.6%)*	9/142 (6.3%)*	106/142 (74.6%)*	130/142 (91.5%)	108/140 (77.1%)*
Marital status	Never married	104 (24.4%)	40/93 (43.0%)	54/96 (56.3%)	7/94 (7.4%)	71/88 (80.7%)	82/88 (93.2%)	65/91 (71.4%)
	Currently married	187 (43.9%)	52/167 (31.1%)	126/175 (72.0%)	14/167 (8.4%)	135/162 (83.3%)	150/162 (92.6%)	125/162 (77.2%)
	Separated/divorced	48 (11.3%)	15/44 (34.1%)	32/48 (66.7%)	7/43 (16.3%)	34/44 (77.3%)	43/44 (97.7%)	39/43 (90.7%)
	Widowed	87 (20.4%)	27/79 (34.2%)	52/86 (60.5%)	9/79 (11.4%)	65/78 (83.3%)	70/78 (89.7%)	60/79 (75.9%)
Wealth status	Poorest	246 (57.6%)	73/223 (32.7%)	162/238 (68.1%)	26/223 (11.7%)	180/217 (82.9%)	205/217 (94.5%)	169/218 (77.5%)
	Less poor	181 (42.4%)	61/161 (37.9%)	102/167 (61.1%)	11/161 (6.8%)	126/156 (80.8%)	141/156 (90.4%)	121/158 (76.6%)
Education	None/primary	263 (61.7%)	69/238 (29.0%)	168/252 (66.7%)	17/238 (7.1%)	183/233 (78.5%)	212/233 (91.0%)	181/232 (78.0%)
	Attended secondary	131 (30.8%)	53/118 (44.9%)	75/123 (61.0%)	17/118 (14.4%)	100/113 (88.5%)	109/113 (96.5%)	88/116 (75.9%)
	Completed secondary	32 (7.5%)	11/27 (40.7%)	20/29 (69.0%)	3/27 (11.1%)	22/26 (84.6%)	24/26 (92.3%)	21/27 (77.8%)
Number of children	0-2	104 (24.5%)	41/90 (45.6%)	60/95 (63.2%)	7/90 (7.8%)	75/86 (87.2%)	82/86 (95.3%)	62/88 (70.5%)
	3/4	92 (21.6%)	34/82 (41.5%)	51/87 (58.6%)	12/82 (14.6%)	67/78 (85.9%)	74/78 (94.9%)	62/81 (76.5%)
	5 or more	229 (53.9%)	50/202 (24.8%)	153/222 (68.9%)	18/210 (8.6%)	162/207 (78.3%)	188/207 (90.8%)	164/205 (80.0%)
Household head	No	270 (62.8%)	87/237 (36.7%)	163/249 (65.5%)	18/238 (7.6%)	187/227 (82.4%)	212/227 (93.4%)	176/232 (75.9%)
	Yes	160 (37.2%)	47/147 (32.0%)	101/157 (64.3%)	19/146 (13.0%)	119/146 (81.5%)	134/146 (91.8%)	114/144 (79.2%)

Key: Denominator changes slightly owing to missing data. * represent those figures showing significantly different profiles between sociodemographic groups (Chi² p<0.05). # Full statement was "I felt like I had the chance to participate and ask questions if I wanted to". ^ Full statement was "I participated in the activities organised by my centre in our village and local area"

Contributors

JH led the design of the process evaluation and drafting of this manuscript and contributed to all aspects of the study. AH and GP conducted qualitative interviews and data analysis in South Africa and UK and oversaw collation of the quantitative process data in South Africa. VS and CB co-led the conceptualisation and design of the study and contributed to all aspects of the study. JB contributed to the design of data collection instruments. JK oversaw the design and strategic management of the IMAGE intervention and its implementation during the IMAGE trial. CW, LM, JP had lead roles in the design and implementation of the IMAGE intervention and were key contributors to the IMAGE trial. PP was the principal investigator on the IMAGE trial and contributed to the conceptualisation and design of the process evaluation. All authors contributed to the drafting of this manuscript and saw and approved the final version.

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Conflict of interest statement

We wish to declare two potential conflicts of interest and the measures taken to ensure these have not influenced our findings. Firstly, funding for IMAGE has at times supported both the intervention and its evaluation and has contributed to parts of the salary costs for some of the team at different times (JH, AH, VS, GP, JK, PP, CB). However, no sponsor has had any role in the study design, analysis or interpretation of process or outcome data, or the preparation of this manuscript. Secondly, PP and JK have led the IMAGE partnership and managed staff implementing the health training component of IMAGE throughout the period under study (2001-2007). Each was interviewed on multiple occasions for the purpose of this process evaluation. As is good practice in qualitative research the content of interviews was discussed with these participants and their reflections on interpretation sought. However, neither party has directly contributed to the analysis or interpretation of qualitative data reported in this process evaluation.

References

1. WHO. The Ottawa Charter for Health Promotion. Geneva: World Health Organisation, 1986.
2. Bonell C, Hargreaves J, Strange V, Pronyk P, Porter J. Should structural interventions be evaluated using RCTs? The case of HIV prevention. *Social Science and Medicine* 2006;**63**(5):1135-42.
3. Sweat MD, Denison J. Reducing HIV incidence in developing countries with social and structural interventions. *AIDS* 1995;**9** (suppl A):s251-s257.
4. Tawil O, Verster A, O'Reilly R. Enabling approaches for HIV/AIDS prevention: can we modify the environment and minimise the risk? *AIDS* 1995;**9**:1299-1306.
5. Blankenship KM, Friedman SR, Dworkin S, Mantell JE. Structural interventions: concepts, challenges and opportunities for research. *Journal of Urban Health* 2006;**83**(1):59-72.
6. Parker RG, Easton D, Klein CH. Structural barriers and facilitators in HIV prevention: A review of international research. *AIDS* 2000;**14** (suppl 1):1.
7. Johnson S, Rogaly B. Microfinance and poverty reduction. London: Oxfam 1997.
8. Hadi A. Promoting health knowledge through micro-credit programmes: experience of BRAC in Bangladesh. *Health Promotion International* 2003;**16**(3):219-227.
9. Chowdhury A, Bhuiya A. Do poverty alleviation programmes reduce inequities in health? The Bangladesh experience. In: Leon D, Walt G, eds. *Poverty, Inequality and Health: an international perspective*. Oxford: Oxford University Press, 2001: 312-332.
10. 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: a cluster randomised trial. *Lancet* 2006;**368**(9551):1973-83.
11. Littlefield E, Hashemi S, Morduch J. *Is Microfinance an Effective Strategy to Reach the Millennium Development Goals?* Washington D.C.: Consultative Group to Assist the Poor., 2003.
12. Gupta GR, Whelan D, Allendorf K. 2002 Expert Consultation on integrating gender into HIV/AIDS programmes, 2002.
13. Grown C, Gupta GR, Pande R. Taking action to improve women's health through gender equality and women's empowerment. *Lancet* 2005;**365**(9458):541-3.
14. Watson AA, Dunford C. *From microfinance to macro change: integrating health education and microfinance to empower women and reduce poverty*. New York: United Nations Population Fund, 2006.
15. Strobach T, Zaumseil M. An evaluation of a micro-credit system to promote health knowledge among poor women in Bangladesh. *Health Promot Int* 2007;**22**(2):129-36.
16. Smith S. Village Banking and Maternal and Child Health: Evidence from Ecuador and Honduras. *World Development* 2002;**30**(4):707-23.
17. Parker J, Singh I, Hattel K. *The role of microfinance in the fight against HIV/AIDS*. Geneva: UNAIDS, 2000.
18. Oakley A, Strange V, Bonell C, Allen E, Stephenson J. Process evaluation in randomised controlled trials of complex interventions. *British Medical Journal* 2006;**332**(7538):413-6.
19. Rose D, Charlton KE. Prevalence of household food poverty in south Africa: results from a large, nationally representative survey. *Public Health Nutrition* 2003;**5**(3):383-389.

20. Hargreaves JR, Morison LA, Gear J, et al. "Hearing the voices of the poor": Assigning poverty lines on the basis of local perceptions of poverty; a quantitative analysis of qualitative data from participatory wealth ranking in rural South Africa. *World Development* 2007;**35**(2):212-229.
21. Green J, Thorogood N. *Qualitative Methods for Health Research*. London: Sage, 2004.
22. N6 (Non-numerical Unstructured Data Indexing Searching & Theorizing) qualitative data analysis program [program]. Melbourne, Australia: QSR International Pty Ltd, 2002.
23. Miles M, Huberman A. *Qualitative Data Analysis: An expanded sourcebook*. Thousand Oaks, California: Sage, 1994.
24. Lofland J, Lofland L. *Analyzing social settings: a guide to qualitative observation and analysis*. 3rd ed. Belmont, California: Wadsworth, 1995.
25. Baumann E. Imp-Act cost-effectiveness study of Small Enterprise Foundation, South Africa. *Small Enterprise Development* 2004;**15**(3):28-40.
26. Dunford C. Building Better Lives: Sustainable Integration of Microfinance with Education in Child Survival, Reproductive Health, and HIV/AIDS Prevention for the Poorest Entrepreneurs. In: Daley-Harris S, ed. *Pathways Out of Poverty: Innovations in Microfinance for the Poorest Families*. Bloomfield: Kumarian Press, 2002.
27. Habicht JP, Victora CG, Vaughan JP. Evaluation designs for adequacy, plausibility and probability of public health programme performance and impact. *International Journal of Epidemiology* 1999;**28**:10-18.
28. Kim JC, Watts C, Hargreaves JR, et al. Understanding the impact of a microfinance-based intervention on women's empowerment and the reduction of intimate partner violence in the IMAGE Study, South Africa. *American Journal of Public Health* 2007;**97**(10):1794-802.
29. Schuler SR, Hashemi SM. Credit programs, women's empowerment, and contraceptive used in rural Bangladesh. *Studies in Family Planning* 1994;**25**(2):65-76.
30. Phetla G, Busza J, Hargreaves JR, et al. "They Have Opened Our Mouths": Increasing Women's Skills And Motivation For Sexual Communication With Young People In Rural South Africa. *AIDS Education and Prevention* 2007;**In Press**.
31. Pronyk PM, Harpham T, Busza J, et al. Can social capital be intentionally generated? A randomized trial from rural South Africa. *Social Science & Medicine* 2007;**Under review**.
32. Epstein H. The underground economy of AIDS. *Virginia Quarterly Review* 2006;**82**(1):53-63.
33. Gregson S, Adamson S, Papaya S, et al. Impact and Process Evaluation of Integrated Community and Clinic-Based HIV-1 Control: A Cluster-Randomised Trial in Eastern Zimbabwe. *PLoS Medicine* 2007;**4**(3):e102.
34. Hargreaves JR, Hatcher A, Busza J, et al. Potential for replication of an intervention addressing the social determinants of health. Geneva: WHO Commission for Social Determinants of Health, 2007.
35. Small Enterprise Foundation. <http://www.sef.co.za/node/29>, 2008.

