

# Process evaluation of the Intervention with Microfinance for AIDS and Gender Equity (IMAGE) in rural South Africa

James Hargreaves<sup>1,2\*</sup>, Abigail Hatcher<sup>1,2</sup>, Vicki Strange<sup>3</sup>, Godfrey Phetla<sup>2</sup>, Joanna Busza<sup>1</sup>, Julia Kim<sup>1,2</sup>, Charlotte Watts<sup>1</sup>, Linda Morison<sup>1</sup>, John Porter<sup>1</sup>, Paul Pronyk<sup>1,2</sup> and Christopher Bonell<sup>1</sup>

## Abstract

The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) combines microfinance, gender/HIV training and community mobilization (CM) in South Africa. A trial found reduced intimate partner violence among clients but less evidence for impact on sexual behaviour among clients' households or communities. This process evaluation examined how feasible IMAGE was to deliver and how accessible and acceptable it was to intended beneficiaries during a trial and subsequent scale-up. Data came from attendance registers, financial records, observations, structured questionnaires (378) and focus group discussions and interviews (128) with clients and staff. Gender/HIV training and CM were managed initially by an academic unit ('linked' model) and later by the microfinance institution (MFI) ('parallel' model). Microfinance and gender/HIV training were feasible to deliver and accessible and acceptable to most clients. Though participation in CM was high for some clients, others experienced barriers to collective action, a finding which may help explain lack of intervention effects among household/community members. Delivery was feasible in the short term but both models were considered unsustainable in the lon-

ger term. A linked model involving a MFI and a non-academic partner agency may be more sustainable and is being tried. Feasible models for delivering microfinance and health promotion require further investigation.

## Introduction

Microfinance institutions (MFIs) typically provide small loans to poor women to support income-generating activities which can promote health through poverty reduction and female empowerment [1–5]. Many believe that combining microfinance with health promotion such as health education and community mobilization (CM) is a promising approach to maximizing health gains [6–9]. However, many MFIs emphasize specialization in credit delivery, arguing that providing additional services might undermine financial sustainability [10, 11]. Evidence to inform these debates is lacking. Little is known about the effects of combining microfinance with health promotion, about the feasibility of delivering such programmes or their accessibility and acceptability to clients.

Poverty, entrenched gender inequalities and lack of community cohesion support high levels of intimate partner violence (IPV) and HIV transmission in rural South Africa [12]. The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) combines microfinance, gender/HIV-awareness training [Sisters for Life (SFL)] and CM in an attempt to tackle these health issues in this setting [4]. Details of the intervention components are provided in Table I.

<sup>1</sup>Infectious Disease Epidemiology Unit, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, UK, <sup>2</sup>School of Public Health, University of the Witwatersrand, PO Box 2, Acornhoek 1360, South Africa and <sup>3</sup>Social Science Research Unit, Institute of Education, 18 Woburn Square, London WC1H 0NR, UK

\*Correspondence to: J. Hargreaves. E-mail: james.hargreaves@lshtm.ac.uk

We conducted a cluster-randomized trial of IMAGE from 2001 to 2004 and subsequently scaled up delivery during 2005–07. We collected data on health outcomes during the trial and have collected process data throughout, guided by a conceptual framework [14]. During the trial, the process data were principally intended to supplement outcome data by examining field staff’s and participants’ perspectives on the intervention and exploring possible causal pathways. As scale-up commenced, we decided to collect further retrospective data on de-

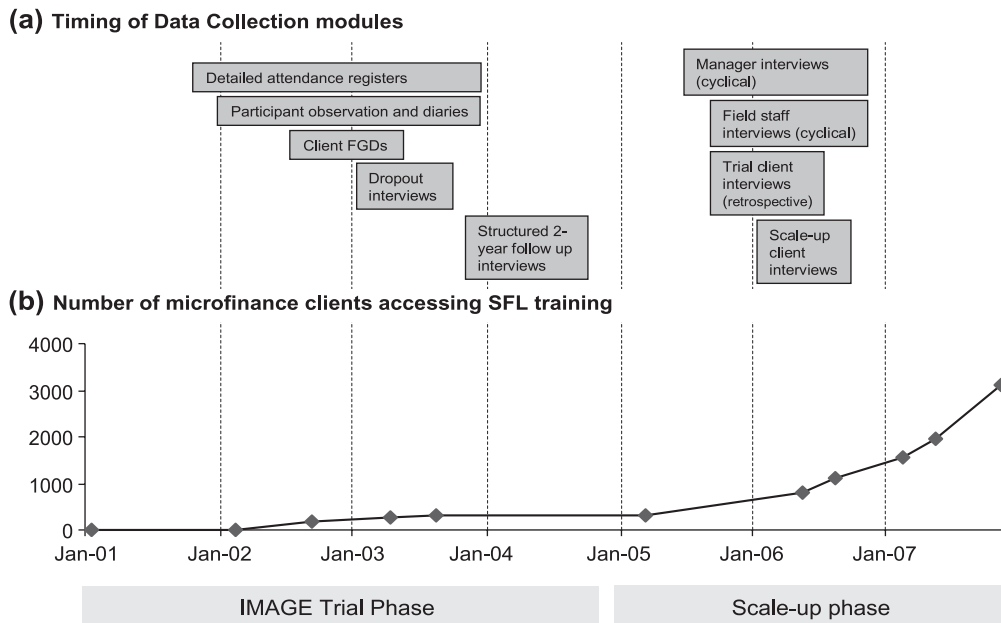
livery during the trial as well as prospective process evaluation data from managers, field staff and clients [15]. This new data collection occurred during 2005–07.

In the trial, IMAGE was associated with a significant reduction in IPV and sexual risk behaviour among IMAGE clients but there was little evidence of an impact on condom use or HIV incidence among young people in clients’ households or communities [4, 16, 17]. This paper explores the feasibility of IMAGE delivery and the accessibility and

**Table I.** *The IMAGE intervention*

Component	Key features
Poverty-focused microfinance	<p>Facilitated by one SEF fieldworker in each village and comprising:</p> <ul style="list-style-type: none"> <li>-Identification of the poorest households using participatory wealth ranking [13]</li> <li>-Recruitment and group formation for mutual credit guarantee and support (one group = five women)</li> <li>-Individual borrowing and repayment of loans over 10/20 week cycles</li> <li>-Fortnightly centre meetings (one centre comprises ~40 women in eight groups)</li> <li>-Ongoing business assessment and impact monitoring</li> </ul> <p>SEF staffing was in line with staffing across the whole organization. Three field staff and one branch manager worked on IMAGE during the trial and a further eight field staff and one manager during scale-up.</p>
SFL gender and HIV/AIDS awareness training	<p>SFL was developed and initially managed by RADAR, Witwatersrand University. A team of SFL trainers work across many villages to conduct 10 sessions within fortnightly SEF centre meetings over ~6 months.</p> <ol style="list-style-type: none"> <li>1. Introductions</li> <li>2. Reflecting on Culture</li> <li>3. Gender Roles</li> <li>4. Women’s Work</li> <li>5. Our Bodies, Our Selves</li> <li>6. Domestic Violence</li> <li>7. Gender and HIV</li> <li>8. Knowledge is Power</li> <li>9. Empowering Change</li> <li>10. Way Forward</li> </ol> <p>A team of four trainers delivered SFL and CM during the trial, expanding to 10 during scale-up.</p>
Support for CM	<p>Following completion of SFL, these activities are also led by SFL trainers</p> <ul style="list-style-type: none"> <li>-Election of ‘NLs’ from within centres (up to five per centre)</li> <li>-External training for NL</li> <li>-Development of centre-based action plans responding to local priority issues</li> <li>-Six to nine months of continued facilitation by SFL trainers, decreasing over time</li> </ul>

NL, natural leader.



**Fig. 1.** Timeline of research and delivery of IMAGE intervention in rural South Africa 2001–07. The figure shows (a) the timing of data collection modules (grey boxes) and (b) the cumulative enrolment of microfinance clients to SFL training (black line) over a 7-year period 2001–07; FGD, focus group discussion.

acceptability of IMAGE for intended clients [18]. Feasibility refers to the practicality of delivering the intervention as intended, accessibility to whether the intervention reached and fully involved intended clients and acceptability the extent to which clients found participation satisfactory [18]. We discuss the relevance of our findings to debate about the merits of ‘linked’ and ‘parallel’ models of intersectoral collaboration [19]. We also consider whether our findings on process help explain the outcomes observed in the IMAGE trial and their relevance for potential replication of IMAGE in other settings.

## Methods

### Setting

IMAGE was delivered in South Africa’s impoverished but rapidly developing Limpopo province

[13, 20]. An established non-profit organization, the Small Enterprise Foundation (SEF), delivered microfinance while the Rural AIDS and Development Action Research (RADAR) programme of Witwatersrand University initially delivered SFL and facilitated CM. The IMAGE trial enrolled 430 female clients in 10 loan centres from four villages through one SEF branch (A). Following this, the scale-up phase recruited >3000 clients from 115 villages (Fig. 1). Scale-up initially expanded to clients who had been recruited to microfinance in Branch A but had not yet received the SFL or CM components. Delivery of SFL and CM to clients of a further SEF branch (B) subsequently began in early 2006. As will be discussed further below, during the trial, IMAGE used a linked delivery model [19], with staff from the two specialist organizations delivering services to the same clients. During scale-up, a parallel delivery model [19] was tried, where both sets of

staff were, to some extent, managed by one organization (SEF).

### Data collection

We conducted a multi-method process evaluation drawing on nine data collection modules, the timing of which are shown in the Fig. 1. Throughout the trial (2001–04), registers were kept to provide data on recruitment, dropout and attendance of the intervention to examine accessibility. During this period, we explored intervention feasibility and acceptability via qualitative data from researchers' notes on 134 hours of observation of intervention delivery covering the full SFL curriculum in the first four loan centres enrolled, intervention provider diaries ( $n = 4$ ), focus group discussions with clients ( $n = 16$ ) and semi-structured interviews with clients who dropped out of the programme after completing a loan cycle ( $n = 19$ ). We also later (2005–06) conducted retrospective interviews with a convenience sample of trial clients ( $n = 15$ ). Client year-2 follow-up questionnaires conducted primarily during 2004 provided quantitative data on acceptability by examining participation and satisfaction in SFL sessions, recruitment of 'natural leaders' and participation in CM. Response rate for these questionnaires was 87.9% (378/430 clients interviewed).

During scale-up (2005–07), we used semi-structured interviews to explore views on feasibility of delivery during the trial (retrospectively) and scale-up (prospectively), conducting 7 interviews with RADAR managers (5 individuals), 16 interviews with SEF managers (12 individuals), 33 interviews with RADAR field staff (10 individuals) and 14 interviews with SEF field staff (14 individuals), thus sampling all providers with significant contact with the intervention. In 2006, we also conducted semi-structured interviews with 22 scale-up clients randomly selected from client lists covering both branches. In the scale-up phase, resources were not available to conduct client surveys on accessibility or acceptability. Finance monitoring systems provided data on loan repayment. All research participants gave informed consent for their partic-

ipation. All semi-structured interviews were conducted in private at a location convenient to the participant and normally lasted 45–60 min. Questionnaires were conducted in similar settings and of a similar length though covered a broader range of issues many of which are not discussed here. Ethical approval was granted by ethics committees at the London School of Hygiene & Tropical Medicine and the University of the Witwatersrand.

### Data analysis

Interview guides were designed in English. Client and field staff interview guides were translated into the local language (Sepedi) and then back-translated into English to identify and resolve translation issues. Interviews with managers were conducted in English. Qualitative data were transcribed verbatim from digital recordings or other formats and, where necessary, translated independently by two researchers from Sepedi to English. Transcripts were analysed by developing a text coding structure in N6 (QSR International) [21]. Initial codes were determined by our research questions with two researchers coding the transcripts [22]. Transcripts were then coded a second time and each researcher developed codes inductively from the data. In the tradition of grounded theory, close attention was paid to making 'constant comparisons' to challenge the analysis and develop further theoretical insights [23]. Thus, our analysis incorporated the 'top-down' structure of research questions and the 'grounded' voices of informants [24].

Quantitative indicators of accessibility and acceptability were analysed using Stata 9 (STATA-Corp, College Station, TX). Attendance at each of 10 SFL sessions was recorded for all 430 clients included in the trial [4]; thus, data on 4300 client sessions were potentially available and data were actually available on 3986 of these. Monthly dropout from the programme was calculated as the proportion of clients completing loan repayments each month who did not apply for a new loan [25]. Statements regarding acceptability of IMAGE to clients were coded on a four-point scale and distributions of client responses are presented here.

## Results

### How feasible was IMAGE to deliver?

#### *Project initiation*

Interviews with SEF and RADAR managers revealed that RADAR initiated the linked partnership, co-ordinated funding arrangements and led the design of SFL and CM. SEF came to the partnership with experience of successfully delivering microfinance. Despite previous reluctance to engage in collaborations, SEF managers were keen to collaborate with RADAR. This was in part not only because SEF was becoming more financially stable but also because SEF managers were increasingly concerned about HIV/AIDS among their clients and staff. Further, SEF managers were impressed by RADAR and were holding some funds to address HIV/AIDS but had no plans for these. SEF saw the proposal as low risk since RADAR would manage the new components (Quote 1) and because the programme could be implemented in a new branch (A), the establishment of which could draw on the HIV/AIDS funding. Importantly, RADAR also did not propose to make any major changes to SEF's delivery model (Quote 2).

[1] 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)

[2] 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)

#### *Management and implementation during the trial*

During the trial, RADAR managed SFL and CM. Four trainers (all women, one openly living with HIV) were recruited and trained by an external consultant. This was intensive and focused on facilitation skills and reflection about one's own circumstances followed by practice sessions (Quote 3). Trainers found all these of value.

[3] It is knowing that as a trainer you have to present very well, we have to be presentable, you have to be at the side of the flip chart ... talk loudly ... it was very stressful because we didn't know what to do [ ... ]. The training was so intense. It had everything to do with the sessions and everything to do with every faculty of your life. You had to be very aware of yourself before you could actually educate someone else. (SFL field staff)

Ten SFL sessions were delivered in each of the 10 loan centres. Selected women from each loan centre were then identified by peers as natural leaders ( $n = 37$ ) and were trained to lead their centres in CM to address priorities identified by clients. Natural leaders were expected to have actively participated during SFL sessions and have good interpersonal and problem-solving skills, although the selection process was determined by clients and differed between centres. Interviews with clients and field staff revealed that CM unfolded in two ways during the trial: individual information sharing and collective action. Individual information sharing (e.g. telling one's children about HIV and safer sex) was widespread, whereas collective action (e.g. formation of a rape committee, workshops on HIV, various marches) was more limited. Reasons for this are discussed later.

SEF managed and successfully implemented the microfinance programme. During the trial, unrepaid debt from 'Branch A' totalled <100USD from some 290 000USD disbursed. Microfinance performance

in the trial was considered good even by SEF's high standards. Managers reported that SEF fieldworkers working on IMAGE were among the highest performing across SEF. Their collaboration with SFL was suggested as one possible reason for this success, though it was recognized this was difficult to prove (Quote 4).

[4] Every year we do award the best [microfinance field-staff]. It is a very competitive award and all [the fieldworkers] 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)

SEF and SFL managers cited several factors as promoting successful delivery during the trial. These included the following: RADAR garnering SEF management support by raising awareness of the inter-relationship of poverty, IPV and HIV among clients; intensive training for SFL staff provided by an expert consultant and on-going support for trainers provided by RADAR management. One challenge during this phase was that SFL trainers had access to infrastructure support in the form of office computers and a team car which created tensions with SEF staff who used public transport and saw working conditions as somewhat unequal.

#### *Intervention management and delivery during scale-up*

Following the trial, management interviews showed that enthusiasm for IMAGE led the partners to plan the scale-up. RADAR managers felt long-term service delivery was outside their remit, so the organizations decided to explore SEF managing SFL and CM in parallel with microfinance in the scale-up (Quote 5).

[5] 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 financially sustainable credit delivery remained central so that a complex and evolving management structure emerged. SEF was responsible for management and performance appraisal of SFL staff, while RADAR administered salaries and supported recruitment, training, mentoring and monitoring of trainers. A former trainer managed the SFL team and championed IMAGE within SEF, while a SEF manager co-ordinated SFL with SEF's core business. Because of earlier tensions regarding differences in working conditions, policies of SEF and SFL field staff were aligned (Quote 6) and various activities were undertaken to promote collaboration in the field (e.g. the SEF managing director facilitating joint workshops).

[6] For me one of the things is that we have got to see if we can get the productivity of the [SFL] 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)

Overall, the SFL programme continued to be delivered successfully as the team expanded to include 10 SFL field staff. New recruits were expected to have relevant experience, so requiring less training and support. Training of new SFL field staff was carried out by existing SFL trainers and focused less on personal reflection. The full programme of SFL sessions was delivered in both branches with minor changes to content. In 'Branch



A', CM increasingly focused on individual information sharing and trainers spent less time facilitating it because of their challenging workloads. In 'Branch B', CM was not implemented immediately in all centres on account of low attendance resulting from an unauthorized change by SEF fieldworkers to the way clients repaid loans.

The parallel management model was severely tested during scale-up. At times, staff were unclear whether SEF's role was to liaise with or manage the SFL team. These difficulties were compounded by staff turnover and illness and the attendance problems in 'Branch B'. Uncertainties emerged regarding the most appropriate division of responsibilities in the partnership and these negatively affected SFL staff morale (Quote 7).

[7] So, we are supposed to be part of SEF but we are not clear how we are going to fit into it. Because we just know that it is going to be part of the branch somehow. It is going to seem like we are going to work for SEF, but as different departments. (SFL field staff)

Despite these challenges, SEF and RADAR managers remained enthusiastic about the combined intervention and were committed to future work as the scale-up drew to a close. However, the parallel model used during scale-up was deemed unfeasible for longer term work (Quote 8). Managers expressed a preference for a different type of linked model, with a newly established service delivery organization to be responsible for acquiring external funding, employing trainers and delivering SFL and CM (Quote 9).

[8] 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 field-staff)

[9] 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)

### How accessible and acceptable was IMAGE for intended clients?

#### *Accessibility and acceptability of SFL*

Attendance at SFL sessions was compulsory for loan recipients and thus dependant on recruitment and retention of women for microfinance. Registers showed that 430 women were recruited to the trial in 15 months as planned (Table II). As intended, these women were mostly >35 years of age, were often heads of very poor households and had limited education and multiple children (Table II). During scale-up, at least 3000 microfinance clients were involved in IMAGE (Fig. 1).

During the first 18 months of the trial, SEF records showed that dropout from microfinance was 11.1%, lower than SEF's overall average (16.2%), although later the rate approached this average. Cumulatively, 134/428 clients (31.3%) surveyed at 2-year follow-up were no longer SEF members with main reasons for dropout cited in interviews (Quote 10) and questionnaires being trouble keeping up with repayments (37.3%) and death or illness in the household (16.4%). Only four (3.0%) dropouts cited the added SFL sessions as the reason.

[10] 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)

Registers showed that clients attended a median of 8/10 SFL sessions (interquartile range 5–10). Of all client sessions on which data were available, 2790/3986 (70.0%) were attended, 532 (13.4%)

**Table II.** Socio-demographic profile of IMAGE clients, dropouts, consistent attenders and natural leaders and responses to IMAGE

Characteristic	Grouping	All recruited clients, n (%)	Programme dropout by 2 years, n (%)	Attended more than seven SFL sessions, n (%)	Became a 'natural leader', n (%)
Age group	<35 years	116 (27.1)	53/103 (51.5)*	60/104 (57.7)*	7/103 (6.8)*
	35–44 years	154 (36.0)	45/138 (32.6)*	93/147 (63.3)*	21/139 (15.1)*
	>44 years	158 (36.9)	36/143 (25.2)*	111/155 (71.6)*	9/142 (6.3)*
Marital status	Never married	104 (24.4)	40/93 (43.0)	54/96 (56.3)	7/94 (7.4)
	Currently married	187 (43.9)	52/167 (31.1)	126/175 (72.0)	14/167 (8.4)
	Separated/divorced	48 (11.3)	15/44 (34.1)	32/48 (66.7)	7/43 (16.3)
	Widowed	87 (20.4)	27/79 (34.2)	52/86 (60.5)	9/79 (11.4)
Wealth status	Poorest	246 (57.6)	73/223 (32.7)	162/238 (68.1)	26/223 (11.7)
	Less poor	181 (42.4)	61/161 (37.9)	102/167 (61.1)	11/161 (6.8)
Education	None/primary	263 (61.7)	69/238 (29.0)	168/252 (66.7)	17/238 (7.1)
	Attended secondary	131 (30.8)	53/118 (44.9)	75/123 (61.0)	17/118 (14.4)
	Completed secondary	32 (7.5)	11/27 (40.7)	20/29 (69.0)	3/27 (11.1)
Number of children	0–2	104 (24.5)	41/90 (45.6)	60/95 (63.2)	7/90 (7.8)
	3/4	92 (21.6)	34/82 (41.5)	51/87 (58.6)	12/82 (14.6)
	≥5	229 (53.9)	50/202 (24.8)	153/222 (68.9)	18/210 (8.6)
Household head	No	270 (62.8)	87/237 (36.7)	163/249 (65.5)	18/238 (7.6)
	Yes	160 (37.2)	47/147 (32.0)	101/157 (64.3)	19/146 (13.0)

Denominator changes slightly owing to missing data. \* represents significantly different profiles between socio-demographic groups (chi-square  $P < 0.05$ ).

were missed due to non-attendance by current members, while 277 (7.0%) were not attended due to individuals having left SEF and 387 (9.7%) were due to individuals not yet having joined by that session. Attendance was lowest among women <35 years of age who were most likely to drop out of the programme (Table II). Although quantitative data for attendance during scale-up are not available, qualitative data suggest overall patterns of attendance were similar. The reliance of SFL on successful microfinance functioning was highlighted when attendance at 'Branch B' was reduced by changes to the way that loans were repaid.

Clients valued SFL, particularly the focus on communication, new information, social support and increasing confidence (Quote 11 and Table III).

[11] 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 considered highly skilled (Table III). Only a minority of clients expressed concerns in interviews about sessions being too long, content being inappropriate or confusing, trainers being too young or SFL being compulsory (Quote 12).

[12] 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)

SFL trainers outlined factors that they considered influenced clients' satisfaction with the programme. These included recruiting trainers locally so they understood clients' lives and ongoing mentoring which enabled personal reflection and helped them connect with clients. A shift to less intensive mentoring by senior trainers (rather than external consultants) may have contributed to a reported reduction in trainer morale at certain points in the scale-up. The perception that SEF fieldworkers supported SFL was also important and engaging both groups of staff in joint activities helped promote



**Table III.** Indicators of acceptability of SFL and CM

Statement	<i>n</i>	I strongly agree, <i>n</i> (%)	I agree, <i>n</i> (%)	I disagree, <i>n</i> (%)	I strongly disagree, <i>n</i> (%)
The trainers were well informed and knew a lot about the subjects	373	327 (87.7)	40 (10.7)	2 (0.5)	4 (1.1)
I felt uncomfortable with some of the topics	373	28 (7.5)	30 (8.0)	165 (44.2)	150 (40.2)
I felt like I had the chance to participate and ask questions if I wanted to	373	182 (48.8)	124 (33.2)	53 (14.2)	14 (3.8)
I learned nothing new	373	38 (10.2)	25 (6.7)	133 (35.7)	177 (47.5)
The training has had a major impact on my life	373	255 (68.4)	91 (24.4)	15 (4.0)	12 (3.2)
I often spoke of what I learned in the training to family and friends outside of the meetings	374	282 (75.4)	71 (19.0)	14 (3.7)	7 (1.9)
The people in my loan group support me when I am having problems	378	249 (65.9)	88 (23.3)	17 (4.5)	24 (6.3)
I was active in trying to formulate and do an 'action plan' with my centre	376	189 (50.3)	137 (36.4)	45 (12.0)	5 (1.3)
I participated in the activities organized by my centre in our village and local area	376	182 (48.4)	108 (28.7)	79 (21.0)	7 (1.9)
I think my centre was successful in trying to change things in our village through its action plans	373	209 (56.0)	129 (34.6)	26 (7.0)	9 (2.4)

collaboration. During the trial, enthusiasm for the SFL programme was occasionally undermined by SEF clients being unaware that SFL and CM were a compulsory condition of membership. During scale-up, clients were clearly informed about both programmes when they joined.

#### *Accessibility and acceptability of CM*

Structured interview data showed that women who took part in the natural leaders training were most often 35–44 years of age and were more educated than average (Table II). Focus group discussions showed that this training was a source of confidence for those clients who took part (Quote 13), but barriers such as sickness, constraints from husbands, childcare and the pressures of running a business meant that some women regarded as potential natural leaders were unable to participate (Quote 14).

[13] 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)

[14] **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.

In the structured interviews, most clients reported that they participated in CM (Table III), and acts of individual information sharing were widespread (Quote 15).

[15] 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)

However, barriers to widespread participation in collective action were noted in qualitative data. Some natural leaders were proactive, while others required ongoing support from SFL trainers over 6–9 months to help plan collective action (Quote 16). Significant barriers limiting clients' ability to participate included the following: other family and community responsibilities, lack of monetary incentives to participate in collective action, need to prioritize running a business (Quote 17), social pressure for privacy and 'respectability' and participants' low status in the community associated with their extreme poverty. These barriers may also have limited the wider impact of CM. In the trial, it was noted that only 40/1182 (4.4%) young people in intervention communities identified 'SEF, RADAR or SFL' as an important source of information about HIV/AIDS.

[16] 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 fieldstaff]'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)

[17] [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)

In 'Branch A', CM occurred in the scale-up much as it had in the trial with more focus on individual rather than collective action. However, in 'Branch B', CM was delayed as a result of the problems with microfinance, and it was decided that

CM would commence only with the strongest centres in this Branch.

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## Discussion

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### Summary of findings

We conclude that it is feasible to deliver gender/HIV training and CM alongside microfinance with impoverished clients without undermining microfinance delivery or repayment. Our evaluation also suggested contextual factors that supported successful delivery of these interventions. IMAGE was delivered by an MFI and an academic unit. A linked delivery model worked well during the trial during which microfinance and SFL proved feasible to deliver and accessible and acceptable to clients. However, during CM, collective action was less pronounced than information sharing and this component did not appear to have the community-wide reach that was intended. Cultural norms, social marginalization and women having a variety of other responsibilities were key barriers. Providers of interventions involving CM need to have realistic expectations of the potential limitations of this approach. During scale-up, the intervention was again largely delivered successfully. The MFI took on management of the intervention through a parallel model because the linked model involving an academic partner was not considered sustainable. Management ambiguities in the new model caused challenges as well. Thus, while both linked and parallel models functioned adequately, neither was considered feasible long term. A new model involving linkage with a non-academic organization will be tried in the next phase of work.

### Limitations

We attempted to collect quantitative data on accessibility and acceptability from all trial clients and were able to follow-up 87.9% of these. However, the views of those who were not interviewed may have differed from those who were. We were not able to assess quantitatively the accessibility or acceptability of training or CM during the scale-up phase, and time restrictions meant we were not able

to document fully the delayed roll-out of CM through 'Branch B'. Further, although all programme staff were interviewed, qualitative interviews in both phases were conducted with a small, albeit random, sample of clients whose views may have been unrepresentative of the majority. Interviews might also have focused on problems more than successes and these may be overemphasized in our analysis. Our detailed observation of intervention delivery focused on the first four centres recruited during the trial. The experience of these centres might also not have been representative since a great amount of energy went into refining the intervention during this phase. However, these centres also highlighted many problems with intervention delivery that were later resolved.

### Implications for research

Our finding that the microfinance and training components were largely delivered as planned, with high levels of client satisfaction and participation, lends plausibility to the outcome of reduced IPV and sexual risk behaviour among direct intervention recipients [4, 26]. This supports previous work where we have documented pathways through which impacts might have been achieved [16, 17]. We found some evidence that contrary to the concern that implementing the combined IMAGE intervention might negatively influence microfinance performance, SEF staff working on IMAGE outperformed other SEF staff. Future research should clarify the potential synergies between health and development projects.

The microfinance and gender/HIV training components of IMAGE did not aim directly to reach young people. CM was intended to reach young people indirectly, via clients engaging in information sharing and collective action. The indirect method for involving youth, together with our finding of significant barriers to collective action for some IMAGE clients, may help explain why the IMAGE trial found little evidence of effects on condom use and HIV incidence among young people in clients' households and communities. Changes in condom use among household members were hypothesized primarily through the combined

influence of changes in the household economy and a process of diffusion from direct clients [27], which may have been overly ambitious. While information sharing and increased communication between IMAGE clients and young people came to be seen as an important aspect of CM [4, 28], this may not have been sufficient to instigate sexual behaviour change over a short follow-up period. Finally, 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, particularly where those targeted were among the very poorest and in many cases most socially marginalized members of their communities. In south Asia, where indirect effects of microfinance on contraceptive use have been observed, nearly half of village households enrol in the programme [27].

### Implications for policy

Regarding IMAGE's potential to be replicated in other settings, it was important that the partnership involved a successful and financially sustainable microfinance organization working in a developing economic environment. Other attempts by HIV/AIDS researchers to partner with microfinance and offer credit alongside other activities have been less successful [29, 30]. Reasons for the failure of these projects remain unclear but may include the stagnant economic climate in Zimbabwe (both projects cited) and the targeting of young women at high HIV risk who may not make optimal microfinance clients. The decision not to change SEF's microfinance delivery model appears to have been key in supporting the delivery of IMAGE, although, as described above, the fact that young people were under-represented likely contributed to the lack of overall impact on HIV risk among this group.

IMAGE employed a linked delivery model in the trial, moved to a parallel model during scale-up and finally settled on a linked model with a non-academic partner for future work. Within the microfinance literature, the parallel model has received more attention than the linked model [31]. Some practitioners even argue that a 'unified' model, involving a single staff member delivering both credit

and education, is preferable to both because linked and parallel approaches are inherently unsustainable due to grant dependency [19]. IMAGE's linked model allowed components to be delivered by specialized staff with long health education sessions based on clear theoretical approaches [32]. However, the significant input required meant that neither an academic unit nor a specialized MFI was prepared to take on management. Interestingly, two major MFIs have recently launched linked model programmes after many years of using unified and parallel approaches [33]. Future research is needed to demonstrate the extent to which these linked models are indeed sustainable and of high quality.

## Conclusions

The IMAGE study was a rare attempt to design and rigorously evaluate a complex intervention involving microfinance and health promotion components in a low-income setting. Our process evaluation is intended to complement the outcome evaluation and maximize learning from the trial and subsequent scale-up. We have focused on the delivery and uptake of the intervention components, and our findings suggest the programme was largely feasible, accessible and acceptable. We provide a plausible explanation for why some of the intervention's intended outcomes were achieved in the trial, while others were not. We also highlight that while microfinance holds great promise as a mechanism for achieving health gains in marginalized populations, finding optimal models for delivering combined microfinance and health promotion will require operational research and ongoing innovation.

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## Conflict of interest statement

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We wish to declare two potential perceived 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 (J.H., A.H., V.S., G.P., J.K., P.P. and C.B.). 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, P.P. and J.K. have led the IMAGE partnership and managed staff implementing the health training component of IMAGE throughout the period under study (2001–07). Each was interviewed on multiple occasions for the purpose of this process evaluation. As is good practice in qualitative research emerging findings were discussed with these participants and their reflections on interpretation sought. However, neither party directly contributed to the analysis or interpretation of qualitative data reported in this process evaluation.

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