

# Delivering development? Evidence on self-help groups as development intermediaries in South Asia and Africa

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## Abstract

Donors and governments increasingly seek to deliver development projects through community-based organizations such as self-help groups (SHGs), but little is known about the effectiveness of such arrangements. This paper briefly summarizes hypotheses regarding the effectiveness of interventions using SHGs and presents the results of an evidence review on the impacts of interventions delivered through SHGs on health, finance, agriculture, and empowerment outcomes in South Asia and sub-Saharan Africa. Though the impacts of SHG-based interventions are generally positive, the evidence base is limited and does not generally test whether alternative delivery mechanisms might be more effective.

**Keywords:** Self-help groups, savings groups, women's groups, community-based organizations, mutual assistance, collective action.

## 1 Introduction

Self-help groups (SHGs) are a common form of community-based organization in many developing countries. Self-help groups are mutual assistance groups in which individuals undertake collective action with the goal of improving their own lives. In some contexts, delivering interventions through local self-help groups may be a response to the hollowing out of the state (Hood, 1991; Milward

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& Provan, 2000). Such devolution is viewed by some authors as a means to enhance local ownership and control (Mansuri & Rao, 2013), and by others as a legitimization of state retrenchment under neoliberal regimes (Clarke, 2005; Fuller & Geddes, 2008). Governments, donors, and non-profit organizations are increasingly delivering interventions through locally-organized SHGs, in the belief that such institutional arrangements will enhance development outcomes, encourage sustainability, and foster capacity in local civil society. In addition, SHGs are thought to provide economies of scale and scope, as the groups may be used to reach more people at a lower cost per person, and may also serve to deliver interventions that address multiple issues.

Using SHGs as platforms for development interventions has greatly expanded in both South Asia and Sub-Saharan Africa, although this growth follows different trajectories and scale in each region. In South Asia the spread of SHGs has been most notable in India, where non-governmental organizations (NGOs) began to promote village development savings groups (credit management groups) in the 1980s. In 1992, India's National Bank for Agriculture and Rural Development (NABARD) launched its savings group linkage program and developed a policy framework and capacity building program for NGOs and SHGs to facilitate these linkages. By 2000, savings groups had become a central part of the Indian government's efforts to mitigate poverty and promote rural livelihoods (Fernandez, 2006; IFAD, 2010). As of 2006, NABARD estimated that over 1,500,000 savings groups were in existence (Sinha et al., 2006).

In Sub-Saharan Africa, SHGs build on longstanding forms of collective savings and labour, including rotating savings and credit associations (ROSCAs) that were widespread prior to NGO-led initiatives (Anderson & Baland, 2002; Gugerty, 2007). In recent years, many NGOs have created and disseminated similar collective savings models such as village savings and loan associations (VSLAs) that build on the ROSCA foundation (Aniket, 2006; Odell, 2012). The international NGO CARE launched its first formal savings group program in Niger in 1991, and several large NGOs including Catholic Relief Services, Plan International, Oxfam, the Aga Khan Foundation, World Vision, and Pact have since introduced savings group promotion programs across the continent (Odell, 2012; Odell & Rippey, 2011). According to a 2011 report, the number of savings groups in Africa reported by seven NGOs across 35 countries totalled just under 200,000, reaching over 3.8 million people; this estimate, however, likely vastly understates the true number of such groups (Odell, 2012). Some governments in Sub-Saharan Africa seek to provide some support to SHGs through government extension agents. But unlike in India, most governments in these countries have not created explicit policy frameworks designed to link SHGs to financial institutions or public institutions (Sinha et al., 2006).

The original goal of many of these SHG programs was to provide members, usually rural women, with access to credit to meet subsistence needs or invest in income generating activities. Due to the flexibility of the savings group model, NGOs often integrate additional activities into saving group programs, such as health, agriculture, or business development (Fischer & Qaim, 2011; Greaney, Kaboski, & Van Leemput, 2013). Despite their popularity as a 'platform' for the delivery of interventions, there are few explications of the theory underlying SHGs, especially outside the area of microcredit, and few reviews of the empirical evidence on whether and how implementing development projects through SHGs improves development outcomes such as health, income, access to financial services, or empowerment.

We contribute to the literature through a review of 47 high quality evaluations of development interventions in South Asia and sub-Saharan Africa implemented through SHGs that target health, financial, agricultural, and empowerment outcomes. The article is organized as follows: we first offer a definition of SHGs and present some basic theoretic principles about the purpose and benefits of SHGs. Since many of these theories are not tested with existing evidence, we return to this theme at the end of the article. Next, we describe our methods for identifying the sample of studies to review and briefly describe this evidence base. We then review evidence of the impacts of SHG-based interventions on outcomes in health, finance, agriculture, and empowerment. We find that on balance SHG-based interventions are associated with positive impacts for group members, though the evidence for many outcomes is too limited to form conclusions and may under-represent null or negative effects. We conclude by proposing avenues for further inquiry, especially noting a need for additional studies testing theories of SHG effectiveness by comparing the impact of interventions when delivered through SHGs and through alternative mechanisms, as well as studies comparing the effectiveness of different forms of SHGs, such as those with and without external facilitation.

## **2 Defining Self-Help Groups**

The term 'self-help group' (SHG) may refer to a wide variety of groups with different forms and institutional structures depending on the context, making these groups difficult to define. In western settings, for example, SHGs are often used to describe mental health or substance abuse support groups, whereas in India the term usually refers to financial cooperatives. A variety of community collective action groups, including peer groups, community support groups, mutual assistance groups, producer groups, asset-building communities, mutual aid groups, burial societies, savings groups, and social insurance groups, could also be considered SHGs.

We define SHGs as mutual assistance organisations through which individuals undertake collective action with a primary goal of improving their own lives. Collective action implies that individuals share their time, labour, money, or other assets with the group to produce both collective and individual benefits (Olson, 1965). Although such groups may provide positive social externalities and public goods (such as increased social capital or enhanced public health), such social benefits are not the primary motivation for individual participation. Private benefits to members – defined in whichever way members see fit – form the primary incentive for participation. In this way, SHGs are different from common pool resource management groups, and from local political organizations such as village committees that focus on providing public and common pool goods (Agarwal, 2001; Ostrom, 1990). Private benefits may not be the only motivation for or outcome of SHG participation. Many SHGs are not ‘single issue’ organizations and take on multiple functions and goals. For example, savings groups and women’s groups often form the basis for other kinds of collective activities (Brody et al., 2016; Greaney, Kaboski, & Van Leemput, 2013; Prost et al., 2013; Saha, Annear, & Pathak, 2013).

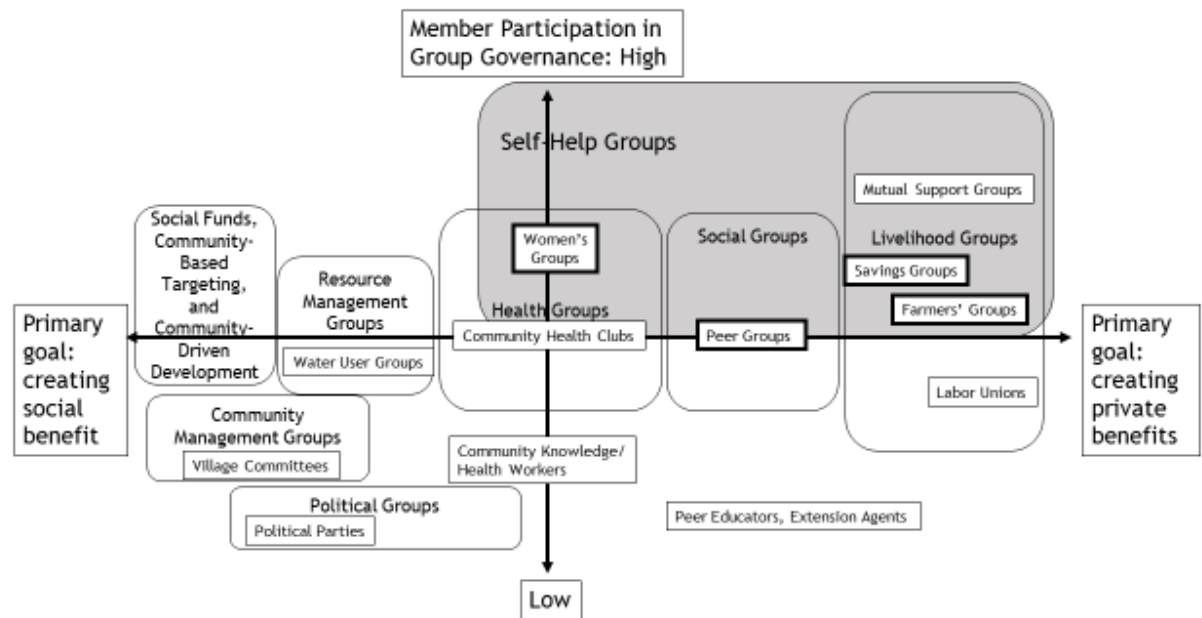
For the purposes of our review, we define SHGs as having the following characteristics:

- A primary goal of improving individual member welfare;
- Self-governance and member participation in decision-making;
- Primary reliance on internally-raised resources which might include member contributions of time, labour, money, or other assets or knowledge;
- Voluntary membership of individuals based on an affinity connection or common interest;
- Regular face-to-face interactions among members (which tends to limit group size).

We can distinguish SHGs from other community-based groups on the first two dimensions above: member participation in governance, and ‘self-help’ or a primary focus on the creation of private benefits for members. Figure 1 locates SHGs in relation to other kinds of community-based groups along these two dimensions. The level of member participation is represented on the vertical axis and the importance of private benefits on the horizontal. Groups in the upper right hand corner fall into our definition of SHGs, having relatively higher member participation in group governance and private benefits a primary reason for joining. Our review of self-help groups excludes Grameen-style microfinance programs for several reasons. Group-based microfinance initiatives are themselves an intervention that already include multiple components (such as training and education), whereas our goal is understanding the potential for delivering various interventions through SHGs as an alternative to

other delivery mechanisms. In addition, one of our criteria is that the group rely substantially on internal resources, which microfinance groups often do not. Finally, microfinance is a well-studied intervention, with the possibility of crowding-out our intent to examine self-help groups in less-studied domains.

Figure 1. Examples of group-based approaches to community-based development



Source: The authors.

### 3 Existing Theory and Evidence on Self-Help Groups

The theory and evidence on how group-based platforms can improve the effectiveness and efficiency of development interventions is surprisingly limited, given the prevalence of SHG-based interventions. In theory, implementing development interventions through SHGs could improve their cost-effectiveness, meaning lowering the cost of providing a target amount of goods and services, often through scale. Or delivery through SHGs could improve intervention efficiency, if the goal is maximizing benefits within a cost constraint.

A few studies examine whether providing development interventions through SHGs could potentially lower the per person costs of providing services through economies of scale. Manandhar et al. (2004) find that women's group members reached an average of six other women with information

on health strategies. Several studies suggest that individuals who participate in any group are more likely to be well connected and participate in multiple groups or community-based organizations, which may lead to spill over effects in the community (Anderson, Baland & Moene 2009; Davis & Negash, 2007). Some forms of groups may be self-replicating, with community members exposed to groups adopting practices on their own (Gillespie, 2004; Hargreaves et al., 2010).

Several studies of interventions that mobilized women's groups to promote maternal and newborn health find that such group-based interventions are highly cost effective (Colbourn et al., 2013; Ensor et al., 2014; Lewycka et al., 2013; Manandhar et al., 2004; Prost et al., 2013; Roy et al., 2013; Tripathy et al., 2010), suggesting that provision through SHGs can provide economies of scale. Lewycka et al. (2013), however, report that the cost per year of life loss averted is greater for interventions delivered through women's groups than interventions delivered through peer counsellors.

Group-based interventions might also provide economies of scope including complementarities across investments or interventions, allowing providers to supply several services or products through one intervention. Several studies report that groups organized primarily to achieve health or finance outcomes are also leveraged to achieve additional outcomes (Colbourn et al., 2013; Dongre, Deshmuk & Garg, 2007; Houweling et al., 2013; Roy et al., 2013). Few studies, however, explicitly compare the cost-effectiveness of group-based interventions to other intervention delivery mechanisms, or examine the effectiveness of specific combinations of interventions against others.

The literature also suggests that groups may generate additional benefits by providing peer pressure, commitment mechanisms, or sanctions that encourage the adoption of new norms, practices, or behaviours. Group participation is often hypothesized to support the development of individual and group capacity, empowerment, and self-efficacy (Quisimbing & Pandofelli, 2009). Studies have found that women's SHG participation supports greater control over household decision making (Bhoj, Bardhan & Kumar, 2013; Caro, Pangare & Manfre, 2013; Desai & Joshi, 2012; Holvoet, 2005), wider participation in civil institutions and political processes (Deininger & Liu, 2009; Holvoet, 2007), and greater overall presence in society (Caro, Pangare & Manfre, 2013; Deininger & Liu, 2009; Desai & Joshi, 2012; Holvoet, 2005; Sinha et al., 2006; Tesoriero, 2006). The literature on rotating savings and credit associations (ROSCAs) suggests that group-based savings programs create a savings commitment mechanism, helping members to stick to their savings plans and protect deposits from the claims of other family members (Gugerty, 2007; Kast, Meier & Pomeranz, 2012).

Groups may also increase the validity and relevance of information by working through trusted peers to share experiences or provide demonstrations (Borkman, 1976; Chesler, 1991). Further, groups

could act as mini-laboratories for experimentation and innovation and may be sources for the development of norms, trust and reciprocal relationships that support social capital (Putnam et al., 1993). Few studies of SHG-based interventions, however, test the mechanisms through which these groups achieve development outcomes by comparing impacts among groups with different characteristics or by comparing interventions delivered through groups versus through outreach to individuals via peers for formal institutions.

Group-based delivery mechanisms may also impede development objectives if flexibility and customization are compromised with 'one size fits all' project design or delivery strategies that don't match important heterogeneity among and within groups (Anderson, Baland & Moene, 2009; Gugerty & Kremer, 2008; Reddy & Manak, 2005; Sinha et al., 2006; Swain, 2012). Moreover, if interventions change the composition of groups as individual seek access to benefits, such access may favour better-off individuals (Gugerty and Kremer, 2008). Differential access to groups may also exacerbate existing inequalities or tensions in a community (Mansuri & Rao, 2012).

The current literature does not provide clear comparative evidence on which types of interventions are most effective or on the underlying mechanisms associated with greater cost-effectiveness or efficacy. As a result, we focus on understanding whether SHG-based interventions are consistently associated with positive outcomes. We then discuss what evidence is needed to better understand which forms of SHG interventions are likely to be effective and efficient and through what mechanisms.

#### **4 Methods and Sample**

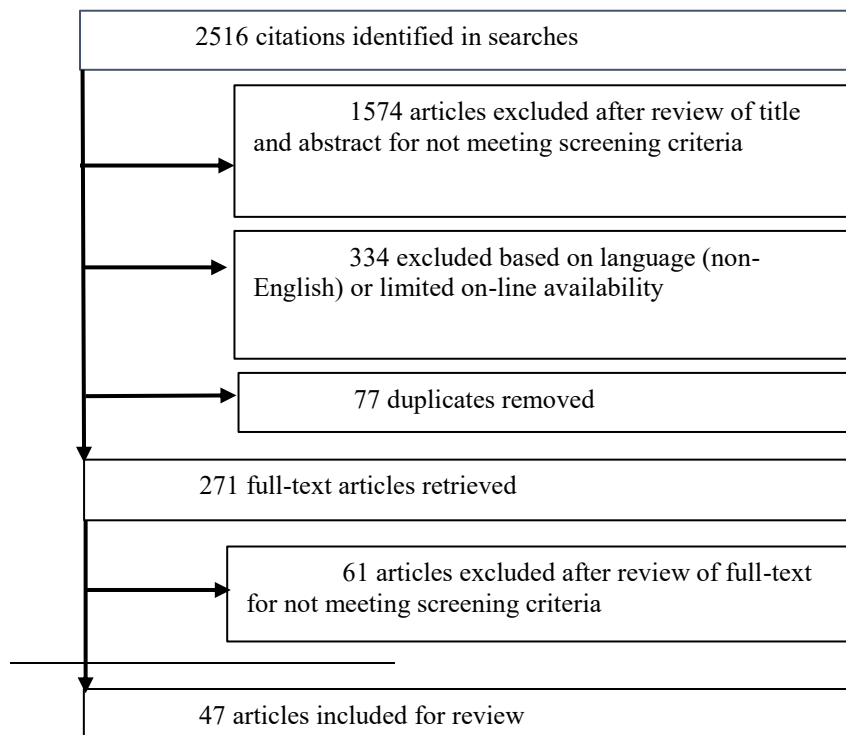
After establishing a definition of SHGs, we conducted a series of literature searches using seven academic databases (PAIS, EconLit, PubMed, the Cochrane Library, Web of Science, Scopus and Google Scholar) to identify rigorous studies of the impacts of interventions delivered through SHGs on targeted outcomes. The search period was restricted to the ten year period 2004-2014.<sup>2</sup> Articles were excluded if

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<sup>2</sup> The search strings used in our review are as follows: ("Self-Help Group" OR "Self Help Group" OR "Community Mobilization" OR "Peer Group" OR "Community Support Group" OR "Mutual Assistance Group" OR "Mutual Aid Group" OR "Social Insurance Group" OR "Savings Group" OR "ROSCA" OR "ASCA" OR "VSLA" OR "Water User Group" OR "Forest User Group" OR "Village Education Committee" OR "Women's Group") AND ("Developing Countr\*" OR "Low-Income Countr\*" OR Africa OR "list of individual countries in Sub-Saharan Africa and South Asia")

they did not: 1) meet our definition of a SHG; 2) report on interventions delivered through these groups in either South Asia or sub-Saharan Africa; or 3) have empirical data on outcomes associated with these groups. Following the search of academic databases, we conducted a Google search for program documents and other grey literature that provided information on interventions undertaken through SHGs. Grey literature was not included in the review of SHG impacts, but did inform our understanding of SHG interventions. Following multiple searches we narrowed our candidates for review to 210 published articles and program documents, as summarized in Figure 2. The most common reason we excluded articles was that the intervention did not take place through SHGs as we defined them. We did exclude, however, a number of articles that were not available in English or as on-line full-text articles (many of which also appeared from the abstract to potentially not meet our screening criteria).

*Figure 2. Summary of Literature Screening*



Supplemental agriculture search string: ("Self-Help Group" OR "Self Help Group" OR "Community Mobilization" OR "Peer Group" OR "Community Support Group" OR "Mutual Assistance Group" OR "Mutual Aid Group" OR "Social Insurance Group" OR "Savings Group" OR "ROSCA" OR "ASCA" OR "VSLA" OR "Water User Group" OR "Forest User Group" OR "Village Education Committee" OR "Women's Group" OR "Farmer's Group" OR "Cooperative" OR "co-op") AND ("Developing Countr\*" OR "Low-Income Countr\*" OR Africa OR "list of individual countries in Sub-Saharan Africa and South Asia") AND Agriculture



Source: The authors.

From this sample of 210 articles, we conducted further eligibility screening to prioritize published and peer-reviewed studies using high quality experimental or quasi-experimental methods or that were otherwise attentive to high technical standards. Following this screening we selected 47 articles for review, each of which rated highly for relevance, evidence of impact, and technical quality, and that also covered a wide variety of outcome areas and geographies in South Asia and sub-Saharan Africa. We attempted to maintain a balance between including high quality empirical evidence and representativeness in our sample. Studies were considered local if they took place in one locality or district or two adjacent districts, regional if they involved multiple districts from one or more adjacent states or regions, national if they involved multiple states or regions dispersed throughout a country, or international if they covered interventions in multiple countries. In total the sample includes 16 local, 23 regional, 4 national, and 4 international studies. Thirty-nine of the 47 studies are published in peer-reviewed journals. The remaining eight include four drafts and working papers in prepublication, three program evaluation documents, and one thesis paper.

This sample of 47 studies is large in comparison to most meta-analyses or systematic reviews in this subject area, which commonly review fewer than 20 studies. Nonetheless, the sample is quite small in relationship to the number of existing SHG-based interventions. Only a small fraction of SHG interventions have been studied, and an even smaller fraction studied in a systematic or rigorous manner. In addition, we found that within our regions of South Asia and Sub-Saharan Africa, the literature was concentrated in particular countries. In South Asia, 24 of the 25 studies report results from India, with three reporting results from Bangladesh, two from Nepal, and one from Pakistan<sup>3</sup>. In Sub-Saharan Africa, 17 of the 23 studies report on interventions in either Kenya, Malawi, or Tanzania. We note that publication bias may favour positive results, though our review identified several instances of mixed, negative, or non-significant findings for particular outcomes. Our results represent the evidence supplied by a relatively small, but high quality, sample of studies of SHGs that possibly underrepresent negative or null results.

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<sup>3</sup> Three studies report on interventions across multiple countries.

We organized our review by the categories of outcomes targeted by SHG interventions, looking at the effectiveness of groups in promoting health, finance, agriculture, and empowerment outcomes. Table 1 summarizes the evidence base for each of these four broad outcome areas. The majority of studies reviewed used an experimental or quasi-experimental methodology; the strength of evidence was highest for maternal, newborn and child health outcomes. Many studies report on more than one category of outcomes, with finance and empowerment outcomes the most common.

Table 1. Evidence Base by Outcome Area – 47 studies total

Outcome Area	Studies Reporting on At Least 1 Indicator in this Outcome Area*			
	# of studies	Geographies covered**	Scale of studies	Methodology of studies
Maternal, Newborn, and Child Health (MNCH)	16	2 Bangladesh, 9 India, 4 Malawi, 2 Nepal, 1 Zambia	3 local, 10 regional, 1 national, 2 international	2 systematic review, 8 experimental, 2 quasi-experimental, 4 non-experimental
Reproductive Health and HIV	10	3 India, 2 Kenya, 1 South Africa, 2 Tanzania, 1 Zambia, 1 Zimbabwe	5 local, 4 regional, 1 national	3 experimental, 5 quasi-experimental, 2 non-experimental
Finance	24	1 Benin, 14 India, 5 Kenya, 1 Malawi, 1 South Africa, 2 Tanzania, 2 Uganda	10 local, 9 regional, 4 national, 1 international	5 experimental, 10 quasi-experimental, 9 non-experimental
Agriculture	11	4 India, 4 Kenya, 3 Tanzania, 2 Uganda	3 local, 4 regional, 3 national, 1 international	3 experimental, 5 quasi-experimental, 3 non-experimental
Empowerment	25	1 Benin, 14 India, 5 Kenya, 1 Malawi, 1 South Africa, 3 Tanzania, 1 Uganda	11 local, 9 regional, 3 national, 1 international	6 experimental, 11 quasi-experimental, 7 non-experimental

\*Note: Many studies report on several outcome areas.

\*\*Some studies were conducted in more than one country, so the “geographies covered” column does not always sum to the total number of studies.

We evaluate the findings for the most commonly reported outcome indicators in each outcome area according to two criteria: the strength of the evidence base and the evidence of impact. The strength of the evidence base for a given outcome is based on the number of studies reporting on that indicator and the study methodology. A higher number of studies and a larger proportion of experimental or quasi-experimental methodologies indicate a stronger evidence base. Evidence on SHG impact is characterized as positive, mixed, negative, or not significant (N.S.). A designation of ‘mixed’ indicates that the results for a given outcome vary across models or sub-populations in the study. For each category of outcomes, we present a table outlining the evidence base and findings for the most common outcome indicators. We do not assign an aggregated rating for strength of the evidence base or evidence of impact in the tables for several reasons. Sample sizes for individual outcome areas are typically too small to disaggregate findings by study, types of groups, or contexts. In addition, given the wide variety of indicators used for many outcomes, using typical meta-analysis techniques for aggregating results is not appropriate. Presenting disaggregated data also allows the reader to assess the relative strength of findings across areas. A full dataset of findings by study and outcome area is publicly available.<sup>4</sup>

## 5 Results

### *5.1 Maternal, Newborn, and Child Health (MNCH) Outcomes*

The outcome area of maternal, newborn, and child health (MNCH) had the strongest evidence base and the most positive association between SHG delivery and outcomes, although the majority of the outcomes studied concerned the adoption of practices rather than morbidity or mortality outcomes. Sixteen studies<sup>5</sup> in our sample report on at least one MNCH practice or outcome. Most interventions were delivered through groups specifically organized for women’s health projects; in some cases, however, the interventions were delivered through pre-existing savings groups. In most groups, a locally-trained facilitator guided members through a process to discuss and identify key MNCH problems in the community, select and implement relevant strategies to address them, and assess the results. In

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<sup>4</sup> <https://evans.uw.edu/policy-impact/epar/research/self-help-groups-development-review-evidence-south-asia-and-sub-saharan>

<sup>5</sup> Alcock et al., 2009; Azad et al., 2010; Colbourn et al., 2013; Dongre, Deshmuk, and Garg, 2007; Ensor et al., 2014; Houweling et al., 2013; Lassi, Haider, and Bhutta, 2010; Lewycka et al., 2013; Manandhar et al., 2004; More et al., 2012; Prost et al., 2013; Rath et al., 2010; Rosato et al., 2006; Roy et al., 2013; Saha, Annear, and Pathak, 2013; Tripathy et al., 2010

seven of the studies, groups were trained using a common participatory learning and action (PLA) cycle; these are also the seven studies reviewed in Prost et al. (2013). Each group was encouraged to identify and implement its own combination of strategies such as developing health education programs, establishing vegetable gardens, or purchasing bed nets to address health challenges (Colbourn et al., 2013; Prost et al., 2013). Some interventions sought also to address barriers to health care access by improving transportation (Ensor et al., 2014; Colbourn et al., 2013) or connecting groups to health care workers (Dongre et al., 2007; Lassi, Haider & Bhutta, 2010). Only Alcock et al. (2009) and More et al. (2012) studied groups in an urban context, conducting different evaluations of the same intervention in an urban slum in Mumbai, India. Their results are inconclusive, raising questions about the effectiveness of SHG-based interventions in urban settings. Table 2 shows the main outcome areas and studies.

*Table 2. Evidence for Maternal, Newborn, and Child Health Outcomes - 16 Studies*

Outcome	# of studies	Strength of Evidence	Findings
Improved maternal and newborn care practices at home	13	7 Experimental 2 Quasi-Experimental 2 Non-Experimental 2 Systematic Reviews	11 Positive, 1 Mixed, 1 NS
Care-seeking for complications	11	5 Experimental 1 Quasi-Experimental 3 Non-Experimental 2 Systematic Reviews	10 Positive, 1 Mixed
Institutional or skilled attendant birth delivery	10	5 Experimental 2 Quasi-Experimental 1 Non-Experimental 2 Systematic Reviews	6 Positive, 4 NS
Infant/neonatal mortality and morbidity rates	10	8 Experimental 2 Systematic Reviews	8 Positive, 2 NS
Maternal mortality and morbidity rates	6	4 Experimental 2 Systematic Reviews	3 Positive, 3 NS

Improving maternal and newborn home care practices is often viewed as a critical component of improving health outcomes for women and children (Baqui et al., 2008; Bhutta et al., 2011; Fikree et al., 2005), and SHG-based interventions appear to positively impact health-seeking behaviour and practices.

Eleven of 13 studies<sup>6</sup> report positive effects on at least some maternal and newborn home care practices, such as duration of breast-feeding and wrapping of infants.

Care-seeking for complications also appears improved with SHG participation. Eleven studies<sup>7</sup> find statistically significant positive differences between treatment and control groups in measures of care-seeking for complications, though four studies<sup>8</sup> only measure awareness of danger signs and not actual care-seeking. Only Dongre, Deshmuk and Garg (2007) measure effects of women's groups on both awareness of danger signs and care-seeking at health care facilities, and found positive effects on both measures. Lassi, Haider and Bhutta (2010) do not find significant impacts on health-care seeking for maternal morbidities, but do find a positive impact on health-care seeking for neonatal morbidities. The evidence on delivery practices (delivery in a facility or with a trained birth attendance) is more mixed, but six out of ten studies<sup>9</sup> report positive effects.

Overall, improvements in care practices and delivery methods appear to translate into better child health outcomes. Eight out of ten studies<sup>10</sup> report significant decreases in neonatal and infant mortality rates among SHG members relative to non-members. The evidence for effectiveness on maternal mortality outcomes is less clear. Three of six studies<sup>11</sup> reporting on maternal mortality report positive effects, including a meta-analysis of seven randomized controlled trials in South Asia<sup>12</sup> that finds that exposure to women's groups was associated with a 37% reduction in maternal mortality (Prost et al., 2013). The other three studies find no effects.

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<sup>6</sup> Positive: Alcock et al., 2009; Ensor et al., 2014; Lassi, Haider, & Bhutta 2010; Lewycka et al., 2013; Manandhar et al., 2004; Prost et al., 2013; Rath et al., 2010; Roy et al., 2013; Saha, Annear, and Pathak, 2013; Tripathy et al., 2010  
Mixed: Houweling et al., 2013

Not significant: Azad et al., 2010; More et al., 2012

<sup>7</sup> Positive: Azad et al., 2010; Dongre, Deshmuk, and Garg, 2007; Ensor et al., 2014; Lassi, Haider, and Bhutta, 2010; Lewycka et al., 2013; Manandhar et al., 2004; More et al., 2012; Prost et al., 2013; Rath et al., 2010; Rosato et al., 2006; Roy et al., 2013

<sup>8</sup> Azad et al., 2010; Ensor et al., 2014; Manandhar et al., 2004; Rosato et al., 2006

<sup>9</sup> Positive: Azad et al., 2010; Dongre, Deshmuk, & Garg, 2007; Ensor et al., 2014; Lewycka et al., 2013; Manandhar et al., 2004; Saha et al., 2013

Not significant: Lassi, Haider & Bhutta, 2010; More et al., 2012; Prost et al., 2013; Roy et al., 2013

<sup>10</sup> Positive: Colbourn et al., 2013; Houweling et al., 2013; Lassi, Haider, and Bhutta, 2010; Lewycka et al., 2013; Manandhar et al., 2004; Prost et al., 2013; Roy et al., 2013; Tripathy et al., 2010

Not Significant: Azad et al., 2010; More et al., 2012

<sup>11</sup> Positive: Lewycka et al., 2013; Manandhar et al., 2004; Prost, et al., 2013

Not Significant: Colbourn et al., 2013; Lassi, Haider, and Bhutta, 2010; More et al., 2012

<sup>12</sup> Azad et al., 2010; Colbourn et al., 2013; Fortrell et al., 2013; Lewycka et al., 2013; Manandhar et al., 2004; More et al., 2012; Tripathy et al., 2010.

## 5.2 Reproductive Health and HIV/AIDS

Ten studies in our sample report on interventions targeting reproductive health and outcomes related to HIV/AIDS (Table 3). These outcomes are closely related to maternal and child health outcomes, but these interventions target specific populations and tend to directly address cultural or social perceptions about sexual practices and family planning. The interventions studied were typically peer-mediated efforts to change behaviour by improving knowledge, attitudes and awareness of HIV, and to facilitate early screening and treatment for sexually transmitted infections (STIs). The results largely report a positive association between SHG participation and changes in knowledge and behaviour. Evidence on changes in health outcomes is rare; only one study reports on HIV transmission rates.

Three studies of peer-mediated behaviour change report on interventions that targeted female sex workers (Kuhlmann et al. 2013; Luchters et al., 2008; Odek et al., 2009). Two studies evaluate interventions that formed groups of adolescents (Carlson et al., 2012; Maro, Robert, & Sorensen, 2009). The remaining studies describe interventions that used existing community groups as a platform to deliver peer education programs.

Table 3. Evidence for Reproductive Health and HIV Outcomes - 10 Studies

Outcome	# of studies	Strength of Evidence	Results
Knowledge and use of contraceptives	7	1 Experimental 4 Quasi-experimental 2 Non-experimental	7 Positive
Risky sexual behaviour	5	2 Experimental 2 Quasi-experimental 1 Non-experimental	4 Positive, 1 NS
Knowledge and use of family planning services and methods	2	1 Experimental 1 Quasi-experimental	2 Positive
Transmission rates of HIV	1	1 Quasi-experimental	1 Positive
Adults seeking Voluntary Counselling and Testing (VCT)	3	2 Experimental 1 Non-experimental	2 Positive, 1 NS

Group interventions do appear to be effective for changing attitudes about and knowledge of reproductive health issues, including contraceptive use, risky sexual behaviour, and knowledge of family planning services and methods, but evidence measuring actual behaviour change is limited. All seven

studies<sup>13</sup> reporting on knowledge and attitudes towards contraceptive use report positive effects as a result of SHG participation. Only two of these studies<sup>14</sup> evaluate condom usage, but both find positive impacts of SHG participation. Four out of five studies<sup>15</sup> report positive effects of SHG participation on attitudes towards risky sexual behaviour. Two experimental studies in India<sup>16</sup> find significant positive impacts on knowledge and use of family planning services as well as methods beyond just contraceptive use.

Evidence as to whether these attitude changes translate into health outcomes is scarce. We found limited evidence on the effectiveness of group-based interventions at combatting the spread of HIV/AIDS, though three of the four studies looking at transmission rates or the seeking of Voluntary Counselling and Testing (VCT) found positive impacts for group members<sup>17</sup>.

### **5.3 Savings and Finance Outcomes**

We identified a relatively large evidence base for financial outcomes, although far fewer studies used experimental methods in this area (Table 4). Nineteen of the 24 studies evaluate interventions with savings groups whose primary goal was to support members' savings and facilitate access to loans. In India many interventions also involved creating linkages with formal financial services. In the other five studies reporting on financial outcomes,<sup>18</sup> savings outcomes are reported as a by-product of a health intervention. We note that while improved savings and access to credit are likely to have positive effects for individuals, few of these studies actually report on individual welfare. Eleven studies report on changes in income, but these are typically not changes in full household income or do not include all income sources. As a result, it is difficult to make assessments about the overall economic impact of SHG participation. None of the reviewed studies evaluate or otherwise report negative consequences from participation, though examples from some studies of microcredit interventions include increased debt, domestic violence, or men using their wives to access credit (Karim, 2011; Schuler & Hashemi, 1998).

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<sup>13</sup> Ensor et al., 2014; Fritz et al., 2011; Hargreaves et al., 2010; Lassi, Haider, and Bhutta, 2010; Luchters et al., 2008; Maro, Robert, and Sorensen, 2009; Odek et al., 2009; Van Rompay et al., 2008

<sup>14</sup> Ensor et al. 2014; Luchters et al. 2008

<sup>15</sup> Significant: Carlson et al., 2012; Hargreaves et al., 2010; Luchters et al., 2008; Maro, Robert, and Sorensen, 2009  
Not significant: Fritz et al., 2011

<sup>16</sup> Desai and Joshi, 2012; Saha, Annear, and Pathak, 2013

<sup>17</sup> Positive: Carlson et al., 2012; Luchters et al., 2008; Van Rompay et al., 2008

Not significant: Fritz et al., 2011

<sup>18</sup> Colbourn et al., 2013; Houweling et al., 2013; Rath et al., 2010; Roy et al., 2013; Tripathy et al., 2010

One systematic review of participation in economic empowerment initiatives on domestic violence finds mixed evidence; with higher levels of assets and education providing protective effects (Vyas and Watts, 2009).

*Table 4. Evidence on Savings and Financial Outcomes - 24 Studies*

Outcome	# of studies	Strength of Evidence	Notes
Savings	18	4 Experimental 8 Quasi-experimental 6 Non-experimental	15 Positive, 2 Mixed, 1 Negative
Access to credit	15	2 Experimental 6 Quasi-experimental 7 Non-experimental	12 Positive, 2 NS, 1 Mixed
Income	11	3 Experimental 6 Quasi-experimental 2 Non-experimental	8 Positive, 3 NS
Micro-enterprise & business creation	8	2 Experimental 4 Quasi-experimental 2 Non-experimental	8 Positive
Ownership of assets	9	1 Experimental 6 Quasi-experimental 2 Non-experimental	8 Positive, 1 NS
Effect on the very poor within groups	6	1 Experimental 2 Quasi-experimental 3 Non-experimental	2 Positive, 3 NS, 1 Negative

Fifteen of 18 studies<sup>19</sup> analysing savings report that savings rates increased for group members. This suggests that group-based saving helps participants either by providing a safe, accessible savings mechanism, perhaps by helping them commit to savings (Gugerty, 2007) or providing a means to resist social network demands (Dagnelie & LeMay-Boucher, 2008, Holvoet, 2005). The evidence does note the

<sup>19</sup> Positive: Anderson and Baland, 2002; Caro, Pangare, and Manfre, 2013; Colbourn et al., 2013; Dagnelie and LeMay-Boucher, 2008; de Hoop et al., 2014; Deininger and Liu, 2009; Desai and Joshi, 2012; Greaney et al., 2013; Holvoet, 2005; Odek et al., 2009; Reddy and Manak, 2005; Swain et al., 2009; Swain, 2012; Tesoriero, 2006; Van Rompay et al., 2008

Mixed: Molyneux et al., 2007; Sinha et al., 2006

Negative: Gugerty and Kremer, 2008



potential risk to members if peers default (Molyneux et al., 2007), but the extent to which this affects individuals is not clear.

SHG participation is associated with increased access to credit, with 12 of 15 studies<sup>20</sup> reporting significant positive effects on credit for group members. In India, a large-scale bank linkage intervention allowed groups demonstrating financial discipline to access loans from banks, which were usually significantly larger than the loans the groups could mobilize on their own (Deininger & Liu, 2009). Some participating groups, however, reported that loans were inadequate in size, took months to receive, and required taking out additional loans in order to make repayments (Reddy & Manak, 2005).

The evidence suggests that SHG participation improved savings rates and access to credit that might facilitate investment in income-generating activities. Eight studies find that members of groups used funding to invest in small businesses either as a group<sup>21</sup> or as individuals<sup>22</sup>. Greaney et al. (2013) report that business investment and time spent on business activities was significantly greater for group members than for non-members. Eight studies<sup>23</sup> report increased income for SHG members from farms or small enterprise. Three studies<sup>24</sup> find no significant impact on income. Eight out of nine studies<sup>25</sup> reporting on the effect of group membership on asset ownership have positive findings. Only Deininger and Liu (2009) do not find any significant impact on accumulation of assets over time, which they speculate was due to droughts and large crop failures at the time of the survey.

While the evidence on financial outcomes suggests positive effects on savings and access to credit and asset ownership, the evidence also suggests that SHGs may be less effective at reaching or changing outcomes for the very poor. Only two of the six studies<sup>26</sup> reporting on impacts on the very

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<sup>20</sup> Positive: Caro, Pangare, and Manfre, 2013; Deininger and Liu, 2009; Dongre, Deshmuk, and Garg, 2007; Greaney et al., 2013; Hargreaves et al., 2010; Holvoet, 2005; Kaganzi et al., 2009; Molyneux et al., 2007; Saha, Annear, and Pathak, 2013; Sinha et al., 2006; Swain et al., 2009; Swain, 2012

Mixed: Reddy & Manak, 2013

No impact: Deininger and Liu, 2009; Gugerty and Kremer, 2008

<sup>21</sup> Baird et al., n.d.; Caro, Pangare, and Manfre, 2013; Sinha et al., 2006

<sup>22</sup> Dagnelie and LeMay-Boucher, 2008; Greaney et al., 2013; Holvoet, 2005; Odek et al., 2009

<sup>23</sup> Baird et al., n.d.; Bhoj, Bardhan, and Kumar, 2013; Caro, Pangare, and Manfre, 2013; Dagnelie and LeMay-Boucher, 2008; Greaney et al., 2013; Kaganzi et al., 2009; Odek et al., 2009; Saha, Annear, & Pathak, 2013

<sup>24</sup> Deininger and Liu, 2009; Desai and Joshi, 2012; Swain and Varghese, 2009

<sup>25</sup> Anderson and Baland, 2002; Baird et al., n.d.; Bhoj, Bardhan, and Kumar, 2013; Caro, Pangare, and Manfre, 2013; Dagnelie and LeMay-Boucher, 2008; Desai and Joshi, 2012; Sinha et al., 2006; Swain and Varghese, 2009

<sup>26</sup> Positive: Deininger and Liu, 2009; Swain, 2012

No impact: Molyneux et al., 2007; Reddy and Manak, 2005; Sinha et al., 2006

Negative: Gugerty and Kremer, 2008

poor report positive effects. Interventions in both of these studies included specific targeting mechanisms including social campaigns, in-kind contribution schemes, and lending tailored to vulnerable populations. Molyneux et al. (2007) find that the poorest households and individuals are least likely to be reached through existing groups and that working only through existing groups may risk widening gaps between the poor and poorest individuals. Sinha et al. (2006) report that the barriers to group entry for poor individuals are high, and that moreover, of the women who have been a member of an Indian savings group for seven years or more, half are (still) poor, including 13% still classified as very poor. Overall, the association between SHG participation and financial outcomes appears positive, albeit with the rather large caveat that increased savings, assets, and credit may not always translate into improved welfare for participants.

#### **5.4 Agricultural Outcomes**

The impacts of SHG participation on agricultural outcomes are harder to assess: the outcome measures used (such as yield, technology adoption or income) vary widely and are often self-reported rather than objectively measured. Eight out of eleven studies<sup>27</sup> report positive findings on a variety of agricultural outcomes, while the remaining three studies<sup>28</sup> report mixed results. The sample for agricultural outcomes slightly favours sub-Saharan Africa, but all the African studies are located in three countries in East Africa: Kenya, Tanzania and Uganda. Eight of the eleven studies use either experimental or quasi-experimental designs. Five studies evaluate outcomes for farmer groups (primarily oriented around agricultural activities) and five for savings groups, and one study includes both types of groups. Table 5 presents the evidence base.

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<sup>27</sup> Baird et al., n.d.; Bhoj, Gardhan, and Kumar, 2013; Caro, Pangare, and Manfre, 2013; Greaney et al., 2013; Kaganzi et al., 2009; Place et al., 2004; Sinha et al., 2006; Swain and Varghese, 2009

<sup>28</sup> Barham and Chitemi, 2008; Fischer and Qaim, 2011; Gugerty and Kremer, 2008

Table 5. Evidence for Agriculture Outcomes - 11 Studies

Outcome	# of studies	Strength of Evidence	Results
Technology adoption	3	1 Quasi-experimental 2 Non-experimental	3 Positive
Access and use of inputs	5	2 Experimental 1 Quasi-experimental 2 Non-experimental	4 Positive, 1 NS
Agricultural output and yields	5	1 Experimental 2 Quasi-experimental 2 Non-experimental	3 Positive, 2 NS
Market involvement	4	2 Quasi-experimental 2 Non-experimental	2 Positive, 2 Mixed
Farm income	6	1 Experimental 3 Quasi-experimental 2 Non-experimental	5 Positive, 1 Mixed

Three studies<sup>29</sup> report positive effects of SHG participation on adoption of agricultural technology. Four out of five studies<sup>30</sup> on access and use of inputs report positive effects. Members negotiated for discounts on bulk purchases of pesticides and fertilizer (Caro, Pangare & Manfre, 2013) or made purchases through group credit (Sinha et al., 2006). Gugerty and Kremer (2008) note, however, that even providing groups with inputs directly does not guarantee that they will be used for activities which benefit the group as a whole, as they may be captured by particular members.

Further, assessing whether increased input use translates into increased productivity is difficult. Three of five studies<sup>31</sup> report positive effects of SHG participation on agricultural productivity, but the measures of productivity used varied greatly and effect sizes were not included. Given the number of factors that might influence agricultural production and productivity, overall welfare effects of SHG participation are very challenging to assess.

<sup>29</sup> Caro, Pangare, and Manfre, 2013; Kaganzi et al., 2009; Fischer and Qaim, 2011

<sup>30</sup> Positive: Caro, Pangare, and Manfre, 2013; Fischer and Qaim, 2011; Greaney et al., 2013; Sinha et al., 2006  
No impact: Gugerty and Kremer, 2008

<sup>31</sup> Positive: Caro, Pangare, and Manfre, 2013; Kaganzi et al, 2009; Place et al., 2004  
No impact: Fischer and Qaim, 2011; Gugerty and Kremer, 2008

SHG-based agricultural interventions more commonly target collective marketing to increase market access and sales rather than productivity gains. Two of four studies report positive outcomes in market involvement. Kaganzi et al. (2009) find that female SHG members were consistently able to better access high-value vegetable markets and Caro, Pangare and Manfre (2013) find improvements in their ability to negotiate for better prices. Barham and Chitemi (2008), however, find that only ten of the 19 farmer groups in their study report improved ability to satisfactorily market their production. Five studies<sup>32</sup> report increased farm income but none of these accounted for the cost of increased effort, though Kaganzi et al. (2009) do recognize these costs. One study finds higher sales prices received by SHG members, but again without accounting for marketing costs (Fisher & Qaim, 2011).

### **5.5 Empowerment**

Empowerment is receiving increasing attention as an important potential benefit of SHG participation, particularly for women. A relatively large number of the SHG studies we examined evaluate empowerment outcomes, but usually as a 'side' benefit of the intervention rather than the primary intended outcome of the intervention. The technical evidence base in this area is weak; there is no study in which an 'empowerment' intervention is randomly assigned. In addition, the consistency of empowerment measures varies widely and empowerment is typically self-reported. Nonetheless, studies consistently show positive empowerment outcomes associated with SHG participation. SHG participation is associated with increases in self-confidence, perceptions of autonomy, knowledge of important issues, business training, negotiation skills, financial independence, and mobility for members. The results on empowerment are heavily dominated by studies from India (14 of 25 studies) and by studies involving savings groups (16 out of 25) studies.

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<sup>32</sup> Positive: Baird et al., n.d.; Bhoj, Bardhan, and Kumar, 2013; Caro, Pangare, and Manfre, 2013; Fischer and Qaim, 2011; Kaganzi et al., 2009  
Mixed: Barham and Chitemi, 2008

Table 6. Evidence for Empowerment Outcomes – 25 studies

Outcome	# of studies	Strength of Evidence	Results
Control over decision-making	13	2 Experimental 7 Quasi-experimental 4 Non-experimental	13 Positive
Participation in other community groups or events	8	1 Experimental 3 Quasi-experimental 4 Non-experimental	7 Positive, 1 Mixed
Participation in governance	10	3 Experimental 2 Quasi-experimental 5 Non-experimental	9 Positive, 1 Mixed
Empowerment and self-efficacy	18	4 Experimental 7 Quasi-experimental 7 Non-experimental	16 Positive, 2 Mixed

Thirteen studies<sup>33</sup> find positive impacts of group-based interventions on members' control over decision-making in their households relative to non-members, with one study reporting that longer group membership resulted in a stronger impact (Holvoet, 2005). In general, studies of savings group interventions suggest that the savings commitment mechanisms reinforced women's decision-making authority around savings and household finances, and four studies<sup>34</sup> find increased participation by women in other domains of household decision-making.

SHG participation also appears associated with increased community participation and influence. Four studies<sup>35</sup> find increased decision-making authority for women in community settings. Seven studies<sup>36</sup> find that participation in groups gave women more opportunities to leave the house and become more engaged in the community, including participating in extra-household bargaining with

<sup>33</sup> Anderson and Baland, 2002; Anderson, Baland, and Moene, 2009; Bhoj, Bardhan, and Kumar, 2013; Brody et al., 2016; Caro, Pangare, and Manfre, 2013; Dagnelie and LeMay-Boucher, 2008; Deininger and Liu, 2009; Desai and Joshi, 2012; Holvoet, 2005; Maro, Robert, and Sorensen, 2009; Reddy and Manak, 2009; Sinha et al., 2006; Tripathy et al., 2010

<sup>34</sup> Bhoj, Bardhan, and Kumar, 2013; Brody et al., 2016; Caro, Pangare, and Manfre, 2013; Desai and Joshi, 2012

<sup>35</sup> Brody et al., 2016; Reddy and Manak, 2005; Sinha et al., 2010; Tripathy et al., 2010

<sup>36</sup> Brody et al., 2016; Caro, Pangare, and Manfre, 2013; Dagnelie and LeMay-Boucher, 2008; Desai and Joshi, 2012; Tesoriero, 2006; Holvoet, 2005; Deininger and Liu, 2009; Lassi, Haider, and Bhutta, 2010

community groups, improving community services, and participating in other economic and social activities. All but one of the studies reporting on women's participation in other activities are from India, so there is little evidence from outside of this context.

Group membership also appeared to increase participation in community governance<sup>37</sup>. Deininger and Liu (2009) report that female SHG members were more likely to attend village meetings. Sinha, et al. (2006) find that in 25% of the Indian SHGs they studied, a woman member ran for local political office (in the panchayat or village council), and that in 20% of Indian SHGs a woman member had been elected to office. Other studies report increases in members attending village council meetings, standing for election, and participating in public decision-making bodies, but do not report magnitudes of impact of the interventions. Gugerty and Kremer (2008) report increased visits from government officials and extension agents to groups, but did not report on participation in community governance by group members.

The evidence also suggests that SHG participation is associated with self-efficacy for women, with 16 studies<sup>38</sup> reporting positive impacts on a variety of measures of empowerment and self-efficacy, including self-confidence, perceptions of autonomy, knowledge of important issues, business training, negotiation skills, financial independence, and mobility. Increased financial independence in particular is highlighted in seven studies. However, two studies have mixed findings. Caro, Pangare and Manfre (2013) note that in spite of increased reported empowerment for female group members, division of labour within the household remained unchanged and women continued to bear a larger work burden. De Hoop et al. (2014) find that Indian SHG participation was associated with higher reported feelings of autonomy, but participation had a significant negative impact on subjective well-being in communities with more conservative gender norms, suggesting an important but potentially consequential unintended effect of SHG participation in such settings.

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<sup>37</sup> Sinha et al., 2006; Reddy and Manak, 2005; Rath et al., 2010; Colbourn et al., 2013; Desai and Joshi, 2012; Tesoriero, 2006; Holvoet, 2005; Deininger and Liu, 2009

<sup>38</sup> Alcock et al., 2009; Baird et al., n.d.; Brody et al., 2016; Bhoj, Bardhan, and Kumar, 2013; Deininger and Liu, 2009; Desai and Joshi, 2012; Greaney et al., 2013; Hargreaves et al., 2010; Maro, Robert, and Sorensen, 2009; Odek et al., 2009; Reddy and Manak, 2005; Sinha et al., 2006; Swain, 2012; Swain and Varghese, 2009; Tesoriero, 2006; Tripathy et al., 2010

## 6 Discussion

Our review found reasonably strong associations between SHG membership and improved maternal, new born and child health care (MNCH) practices in South Asia. Evidence is positive but more limited for maternal health and infant and child mortality and morbidity outcomes. Our results are consistent with reviews of other community-based health interventions, such as Lassi, Haider and Bhutta (2010) and Lassi, Kuman and Bhutta (2016), although these studies include interventions such as training and mobilizations of community health workers, in addition to group-based initiatives. These positive associations with MNCH outcomes may be the result of the relatively clearly specified and more easily measured behaviour changes targeted by these interventions, as well as by the large proportion of SHGs involved that were explicitly focused on health and formed specifically for the intervention. In addition, many of these interventions were accompanied by group facilitators, which may have strengthened programs and further supported changes in health practices. One preliminary conclusion is that peer effects from group participation might be particularly helpful in supporting changes in norms and practices.

Participation in SHGs is positively associated with savings levels, access to credit, and asset ownership, but the studies show no clear effects on income or overall welfare. Most of the SHGs in these studies had an explicit savings purpose, but none of the studies explicitly compares SHG-based savings programs to individual savings programs. SHG participation appears positively related to agricultural outcomes although the measurement of these agricultural outcomes remains too weak to draw strong conclusions. Only half of the studies reporting agricultural outcomes primarily evaluate farmers' groups, raising the question of whether 'layering' multiple activities onto SHGs formed for a specific goal is effective.

The evidence on the relationship between women's participation in SHGs and empowerment is encouraging, but limited. Most studies are located in India and the measures used and methodology employed for evaluating empowerment outcomes are weak for the majority of studies. Few studies provide detail on the specific components of the intervention designed to promote empowerment, making it difficult to draw lessons for other programs. While one study reports specific harm from SHG participation (de Hoop et al., 2014) many studies did not evaluate such potential negative effects. Theory and data collection about negative consequences should be a more explicit part of future studies.

The weak evidence base on the impact of participation in SHGs presents several challenges for generalizability and highlights a number of research gaps. First, static frameworks that outline many

potentially important factors predicting SHG success appear in the literature, but few of these frameworks distinguish drivers and co-variates such that testable hypotheses are possible. A large number of factors affect individual behaviour change as well as health, agriculture, financial and empowerment outcomes. The challenge is to acknowledge this range of factors while crafting testable hypotheses and study designs that hold some of these factors constant – at least as a short-run model. Frameworks such as Michie’s behaviour wheel (2012) and Michie et al.’s taxonomy of behaviour change interventions (2013) provide helpful enumerations of key behaviour change factors to consider, but researchers will have to propose key drivers to test within these enumerations if the goal is to understand causality and propose intervention opportunities.

Second, clear and consistent definitions and measurement for many important outcomes still do not exist, particularly outside of health. Outcome measurement is surprisingly uneven and context dependent, and the lack of consistency complicates the interpretation results across studies. Perhaps the trickiest measure is empowerment, considered variously an outcome, a mediating variable, or both. Empowerment might be the explicit goal of an intervention, or may be a hoped for benefit of another outcome, such as increased savings. In many of the studies reviewed, however, empowerment is an important mediating factor for behaviour change. For this specific measure, studies could more explicitly develop their model of empowerment, measuring at the beginning, middle, and end of the study so that we better understand the role of empowerment as a pre-condition, a part of the intervention, and an outcome.

Third, the majority of the evidence does not directly compare SHG-based to non-SHG-based interventions, or systematically assess the effectiveness of different intervention delivery mechanisms. Empirically, the most basic question of whether SHGs are effective cannot be answered without studies that compare SHG intervention delivery to non-SHG delivery, allowing us to assess whether it is the collective, rather than the individual, trait of SHGs that is driving outcomes. Studies could use random assignment to explicitly compare SHG-based interventions to other community mobilization strategies such as individual or peer-to-peer delivery, providing more systematic evidence on the effectiveness of the SHG platform. We found few studies that compared the effectiveness of different community mobilization models beyond three studies focused on MNCH outcomes (Colbourn et al., 2013; Lassi, Haider & Bhutta, 2010; Lewycka et al., 2013) as well as one meta-analysis (Lassi & Bhutta et al 2016). These three studies find that SHG-based interventions are typically as effective as interventions delivered through health workers or clinics, but there may be additional benefits from interventions that



utilize both approaches<sup>39</sup>. For financial, agricultural, and particularly empowerment outcomes, the evidence base could be greatly expanded by additional experimental or quasi-experimental studies. Many proponents of SHG-based approaches view the collective action and social capital creation that may result from groups as essential to behaviour change; from this perspective, running programs without SHGs for comparison purposes makes little sense. Opportunities still exist, however, to run more systematic tests of alternative SHG program effectiveness, as elaborated below.

Fourth, a more nuanced theory on the dynamics of SHG participation over time could help identify the most effective intervention points over the life of an SHG. Studies with a longer time frame would also provide useful evidence about the dynamics of SHG participation. Very few studies followed group participants over time, making it difficult to assess whether positive outcomes in the short or medium run ultimately translate into longer-term improvements in participants' lives. Repeated studies of the Ekjut trial in India (Houweling et al., 2013; Rath et al., 2010; Roy et al., 2013; Tripathy et al., 2010) and of the MaiMwana trial in Malawi (Lewycka et al., 2013; Rosato et al., 2006) indicate that positive impacts on group members persist, but the women's groups in these interventions are formed around pregnant women and therefore do not have consistent membership. As a result, it is not clear whether positive impacts on group members are sustained after their participation in the groups.

Finally, future studies could better gather, test and report more detailed evidence on the specific characteristics of SHGs as well as on the nature of SHG interventions. Specific hypothesized predictors of group success could be tested with randomized treatment and control groups on those margins. More study designs that evaluate one type of group platform against another or that evaluate SHGs with different characteristics could greatly enhance the evidence base on the drivers of SHG effectiveness. We suggest an initial set of factors for investigation, grouping them into four categories: individual member characteristics and group composition; group structure, governance and funding; intervention characteristics; and group formation and duration.

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<sup>39</sup>Colbourn et al. (2013), found that group interventions and improvements in health care facilities were equally effective in reducing neonatal and perinatal mortality rates, but find even greater reductions in clusters that received both interventions. Lassi, Haider & Bhutta (2010) found that group-based interventions performed better than training health workers on reducing early neonatal mortality but not on late neonatal or maternal mortality. Lewycka et al. (2013) found that perinatal, neonatal, and infant mortality fell consistently over three years in areas given the women's group intervention with or without volunteer peer counselling, and that the two intervention types had roughly similar impacts, varying slightly by outcome.

Member individual characteristics such as age, gender, wealth, social status, and occupation affect individual propensity to join and ability to take advantage of opportunities offered by groups. In addition, member heterogeneity within groups along these categories and pre-existing relationships and networks among members can influence group cohesion, dynamics and persistence. Future studies could move beyond average effects and gather better data on the characteristics of those who join (or are recruited) and the differential impacts of interventions on individuals and groups with different characteristics.

Group structure, governance and funding likely affect the ability of groups to engage in externally driven interventions, including whether the SHG has a history of mobilizing its own funds and resources or is externally supported. Tying development outcomes to group rules for electing leadership (as opposed to perhaps donor appointed leaders), meeting frequency, mechanisms for ensuring and sanctioning collective action through peer pressure, social sanctions, collective liability, etc. would increase our understanding of SHGs specifically and group behaviour more generally.

SHG intervention characteristics also appear to matter for outcomes. Some interventions provide an external facilitator; others train group members as facilitators. Interventions may provide training on group functioning and facilitation, others focus more narrowly on the intended outcome. Facilitation and training can be on-going or one time; some approaches make use of particular frameworks, such as the participatory action learning cycle in India. Group linkages to public resources also vary. In India, many SHGs are linked to banks through government-supported programs. In Africa, group formation may be a pre-requisite for receiving credit or other donor assistance. Standardized and externally developed interventions could be compared to those in which groups themselves decide on what activities to pursue.

Group formation and duration also matter. SHGs may be formed as part of an intervention, or may be pre-existing. Some groups have relatively narrow and singular goals (e.g. maternal and child health), while others may have multiple concerns (savings, agricultural production, and child nutrition). The extent to which group goals align directly with intervention goals may also matter. The results for MNCH and savings presented in this review suggest that groups formed for a particular purpose may be more successful in achieving this purpose. This implies that layering one intervention on top of a pre-existing group formed for another purpose may not be appropriate, but much more data are needed to assess this hypothesis. Groups may also vary in their intended duration. Savings groups typically operate on an on-going basis but allow member entry and exit at the end of each cycle. Other groups, such as

those for pregnant women, may have a limited duration intended to support women through delivery and the early months of child-rearing, and may experience greater turnover of members.

Studying the comparative effectiveness of interventions and group characteristics presents a real challenge to researchers, requiring study designs that seek to hold certain elements of context, intervention design, or group features constant. Such designs may require larger sample sizes to permit sufficient variation to test alternative delivery mechanisms. For example, studies can hold intervention design constant, and vary elements of group design, such as recruitment or member characteristics. Alternatively, groups can be formed in similar ways and in similar contexts, but elements of intervention design can vary. Though costly, this information would help policy-makers and implementers understand whether interventions that were successful in one setting are likely to translate into other settings, and to understand the mechanisms underlying successful programs in particular contexts.

Overall our review offers some preliminary evidence to suggest that implementing development interventions through SHGs may have positive impacts on intended outcomes, but we argue that the evidence available to date is too limited to be sure. The knowledge base can usefully be built through studies that randomly assign SHG participation against treatments of interest so that effectiveness and efficiency can be compared to alternatives and by studies that carefully describe the interventions' theory of change and mode of implementation.

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