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Women's Groups, Covariate Shocks, and Resilience: An Evidence Synthesis of Past Shocks to Inform a Response to COVID-19

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Abstract

Interventions with women's groups are increasingly seen as an important strategy for advancing women's empowerment, health, and economic outcomes in low- and middle-income countries, with the potential to increase the resiliency of members and their communities during widespread covariate shocks, such as COVID-19. This evidence synthesis compiles evidence from past shocks on women's group activities and the extent to which women's groups mitigate the effects of shocks on members and communities. We reviewed 90 documents from academic databases, organizational reports, and additional gray literature, and included literature diverse in geography, type of women's group, and shock. We found that covariate shocks tend to disrupt group activities and reduce group resources, but linkages to formal institutions can mitigate this impact by extending credit beyond the shock-affected resource pool. Evidence was largely supportive of women's groups providing resilience to members and communities, though findings varied according to shock severity, group purpose and structure, and outcome measures. Actions to support individual resilience during a shock, such as increased payment flexibility, may run counter to group resilience, however. The findings of the evidence synthesis are largely consistent with emerging evidence about women's groups and COVID-19 in South Asia and sub-Saharan Africa. We finalize the paper with a discussion on policy implications including the importance of sustainable access to financial resources for women's group members; equity considerations surrounding the distribution of group benefits and burdens; and the potential for meaningful partnerships between women's groups and local governments and/or NGOs to enhance community response amidst crises.

1. Introduction

Interventions with women's groups are increasingly recognized as an important strategy for advancing women's empowerment, health, and economic outcomes in low- and middle-income countries (LMICs). Women's groups is an umbrella term commonly used to refer to different models of groups whose membership is primarily female. Objectives of women's groups may include promoting financial inclusion and women's economic empowerment, organizing workers in the informal sector, and improving health outcomes among group members and their communities.

The COVID-19 crisis has highlighted that while acute covariate shocks pose unique challenges for women and women's groups, women's groups may provide members and their communities with particular mechanisms to increase their resiliency to crises (de Hoop et al., 2020).¹

Women's groups can offer an immediate support network for members through mechanisms such as pooled resources and social capital. Groups can adapt their in-place human infrastructure to play an important role in community responses to shocks by disseminating information on health and other topics, contributing to crisis responses by providing necessary household and community services, and helping members obtain access to social protection. In the case of COVID-19, Indian self-help groups (SHGs) and savings groups in sub-Saharan Africa also contributed to producing masks, running community kitchens, and running help desks (de Hoop et al., 2020; de Hoop et al., 2021; Namisango et al., 2021).

This evidence synthesis contributes to the existing literature by compiling evidence of how shocks affected women's groups and their members before the COVID-19 crisis. We first examine how these shocks affected the implementation and activities of women's groups in LMICs. Next, we examine the extent to which women's groups promote resilience for their members and communities. Previous evidence from systematic reviews and impact evaluations suggests that women's groups with economic objectives, such as SHGs in India and savings groups in sub-Saharan Africa, can achieve positive effects on women's empowerment and economic outcomes (e.g. Brody et al., 2017; Barooah et al., 2020). However, it is unclear whether these findings can be extrapolated to contexts experiencing covariate shocks or to the

¹ Covariate shocks are shocks that occur at the community or macro-level (e.g., natural disasters, disease outbreaks, conflict, and economic crises) and may affect many households simultaneously.

COVID-19 crisis especially because social distancing may limit the opportunities of groups to meet (de Hoop et al., 2020).

We examine both immediate and longer-term effects of covariate shocks on women's groups and their members. In this way we add to existing evidence about the short-term effects of COVID-19 on SHG savings in India (Siwach et al., 2021) and how SHGs in India and savings groups in Nigeria may have contributed to mitigating some of the negative short-term effects of COVID-19 on agricultural productivity, consumption, and food security (Agarwal, 2021; de Hoop et al., 2021; Namisango et al., 2021). Triangulating the findings from those studies with the findings from the evidence synthesis allows for learning about the potential longer-term effects of COVID-19 on women's groups and their members. To synthesize evidence about how covariate shocks affected women's groups and their members, we compiled evidence from 90 documents from academic databases, organizational reports, and additional gray literature. We extracted these documents from over 2,800 search results based on a targeted search strategy.

Overall, the evidence showed that covariate shocks tend to disrupt group activities and reduce group resources, but women's groups can support the resilience of members and communities - though findings varied according to contextual characteristics. However, for economic groups in particular, this improved resilience may come at the expense of group resources, indicating a trade-off between member resilience and group sustainability. For example, actions to support individual resilience during a shock, such as increased payment flexibility, may threaten group sustainability by depleting group resources. The evidence further indicates that linkages to formal institutions can mitigate negative effects on group resilience by providing credit beyond the shock-affected resource pool. These findings are largely consistent with emerging evidence on women's groups and COVID-19 (Agarwal, 2021; de Hoop et al., 2021; Namisango et al., 2021; Siwach et al., 2021), indicating that the evidence synthesis can provide important lessons for policy responses to COVID-19 in South Asia and sub-Saharan Africa.

2. Women's Groups and Resilience

There are many different models of women's groups, and they vary in terms of organizing objective, function, size, governance, and linkages to formal institutions (Desai et al., 2020). Groups with economic objectives, such as SHGs, village savings and loan associations (VSLAs), and rotating credit and savings associations (ROSCAs), are formed to promote savings and pool funds from which members can borrow. Other types of groups may focus on

health, agriculture, advocacy, or community resource management – or a particular population group such as mothers, sexual violence survivors, or adolescent girls. Women's groups may be standalone village or urban groups or regional network associations of groups. They may operate independently or with the support of NGOs and/or formal financial institutions.

This broad definition of women's groups enables an inclusive review of the evidence, but such breadth may mask important differences that limit cross-group comparisons. For example, a savings group might play a very different role than a community resource management group when responding to a particular shock. However, despite differing in function and form, most women's groups, even as broadly defined, share some characteristics that allow for examining variation in the relationship of women's groups to shocks across contexts.

We conceptualize resilience, our primary outcome of interest, along three dimensions: an *absorptive capacity* that refers to the ability to cope with or absorb shocks; an *adaptive capacity* that includes learning and strategic adjustments to mitigate the effects of shocks; and a *transformative capacity* that involves a systemic adjustment to the status quo that reduces vulnerability to shocks (Bene et al., 2015; Tanner et al., 2017; Vaughan & Frankenberger, 2018). Individual resilience can refer to individual coping mechanisms and adjustments in various domains, including food security, consumption smoothing and savings, income and employment, psychological outcomes, and health outcomes. Group resilience can refer to the short-term ability of the group to continue functioning as before the shock or to the group's ability to adapt to the shock, and to the longer-term ability of the group to continue functioning or group sustainability. There are many theorized mechanisms through which women's groups can enhance resilience for members in the face of covariate shocks (CARE, 2015; Diaz-Martin et al., 2020; Gram et al., 2019; Vaughan & Frankenberger, 2018; Weingärtner et al., 2017). Financial mechanisms that serve to increase members' absorptive capacity include pooling risk and resources, social commitment to savings, and potential access to formal financial services through group linkages. For example, a VSLA or SHG may provide members with savings and credit with which to absorb the economic losses resulting from a rainfall shock (Demont, 2013; Karlan et al., 2017). Social support mechanisms may enhance members' psychological resilience to shocks (Berry, 2015; Tol et al., 2020). Some groups facilitate learning and technical skills, such as water, sanitation, and hygiene training, and this access to new information may strengthen members' adaptive capacity when faced with waterborne disease outbreaks (Khatibi et al., 2011). Similarly, groups provide access to information networks that enable members to adopt livelihood diversification strategies to smooth household income during shocks (Demont,

2013). Mechanisms such as collective action and group bargaining power can contribute to transformative capacity when women's groups mobilize for system-level change, such as for more inclusive disaster response policy (Clissold et al., 2020; Fordham et al., 2011).

Our examination of both individual and group resilience highlights the existence of a possible tension between strategies that promote the resilience of groups (i.e., the group functioning and infrastructure withstanding the shock) and the resilience of group members (i.e., individual group members withstanding the shock). While the three resilience capacities discussed above (absorptive, adaptive and transformative capacity) offer a helpful background framework for categorising individual resilience, we find that evidence is largely reported in terms of absorptive capacity for individuals; that is, the literature on women's groups and resilience tends to prioritize individual or household outcome measures of consumption smoothing attributable to pooled resources and access to credit. We also find a lack of discussion around mechanisms of group resilience, particularly in the case of aggregate shocks that may threaten group sustainability. In our discussion of the evidence we distinguish between results related to the ways in which covariate shocks may affect women's groups and how groups may adapt policies or activities to sustain *group* resilience (in Section 4.1) and results examining evidence pertaining to *individual* (or household) resilience (in Section 4.2).

This review was motivated by the COVID-19 crisis, and accordingly focuses specifically on member and group resilience to acute covariate shocks. These shocks include natural disasters, disease outbreaks, conflict, economic crises, and other events that have the potential to negatively affect all members of a group simultaneously. Because of the focus on mechanisms specific to covariate shocks, such as natural disasters or COVID-19, we did not examine group members' resilience to idiosyncratic shocks that affect members at the individual level, such as the death of a household member, or to chronic stressors such as poverty or endemic disease.

3. Evidence Synthesis Process

We conducted a rapid evidence synthesis of the literature on women's groups and acute covariate shocks with three primary research questions in mind:

- i. How do shocks affect women's groups? That is, to what extent do shocks affect group resources and activities; how do women's groups adapt to shocks; and what implementation features contribute to group resilience during shocks?

- ii. How do women's groups mitigate the effects of shocks for members? That is, to what extent do women's groups increase the resilience of their members to shocks; what is the variation by shock, group type, and mechanism?
- iii. How do women's groups support community responses to shocks?

Our search strategy aimed to identify, consolidate, and synthesize existing evidence on the impact of shocks on women's groups and the ability of women's groups to mitigate the effects of shocks for their members and their communities. We searched both peer-reviewed literature in academic databases and gray literature for case studies, evaluations, and other evidence on women's groups and shocks. We searched the following databases for literature in English:

- Academic databases (peer-reviewed and gray literature): Google Scholar, Scopus, PubMed, EconLit, Embase, PAIS
- Organization websites and databases: UN Development Fund for Women; BRAC University; BRAC Institutional Repository; World Bank E-Library; Population Council; CARE; Women for Women International; Africal Portal Research Library; ECWG Evidence Repository; 3ie Evidence Hub; WHO IRIS; India's National Rural Livelihoods Mission

We constructed search strings from keyword components for women's groups and a variety of shocks. We incorporated both general and highly specific search strings to return a comprehensive list of search results. We employed search strings in both the academic databases as well as relevant organization websites listed above and supplemented our results with targeted Google searches and forward/backward searching within the reference lists of relevant articles.

Our search process included academic databases of peer-reviewed articles as well as targeted searches of organizational reports, news articles, blog posts, and additional gray literature. We reviewed over 2,800 search results and included 90 documents that: i) met our definitions of women's groups and shocks, ii) were set in a LMIC and published in 1999 or later, iii) were written in English, and iv) addressed our research questions. After building the sample of included literature to review, we extracted information on the document type, geography, women's group, shock, and content relevant to our research questions using a coding spreadsheet. Empirical studies were coded according to research design and methodology, but

we did not appraise the quality of the evidence using a comprehensive risk of bias assessment. The coding spreadsheet is available in Appendix A.

To complement and deepen our analysis, we provide an in-depth description of how women's groups responded to the Ebola epidemic in sub-Saharan Africa. We include both the 2014–2016 Ebola Virus Disease (EVD) outbreak in West Africa as well as the 2018-2020 outbreak in the Democratic Republic of the Congo (DRC), which – similar to COVID-19 – devastated families, disrupted economic and social activities, and resulted in government policies that placed restrictions on mobility, large gatherings, and livelihoods (Langlay, 2014; WHO, 2018). This spotlight on the Ebola crisis allows for a more detailed exploration of the interaction between women's groups and a covariate health shock that requires social distancing, providing in-depth context to complement the findings for each of our research questions.

4. Findings

Our included literature, as shown in Table 1 below, is diverse in geography, type of women's group, and shock.² Though women's groups in sub-Saharan Africa and South Asia are the most widely represented, studies are included from women's groups in low-and middle-income countries across four continents. The groups in the included studies demonstrate a wide variety of goals and organizing purposes—indeed, many groups formed around multiple livelihoods, health, and financial interests. In terms of the types of shocks represented in the sample, we find more literature on natural disasters (56 out of 90 studies) than other acute covariate shocks (e.g., 15 studies on health shocks, 10 on conflict shocks, and 7 on economic shocks). The diversity in our included literature allows for an examination of the varied interactions between different types of women's groups, acute covariate shocks, and the resilience of group members and their communities. We also purposively included studies with outcomes in a wide range of domains, including domains that may not be immediately obvious when discussing resilience. For example, we included outcomes related to pregnancy risks for adolescent girls, which can increase without the protection of time in school during pandemics (Bandiera et al., 2019).

² The categories are mutually exclusive, but we did allow for multiple categories under organizing purpose. In case of doubt, we selected the category that was most closely aligned with the paper. However, the sources included in our search did not always fall neatly into categories, therefore there may have been some inconsistency in coding across the categories described.

Table 1. Overview of Included Literature

Documents Coded (90):	Peer-reviewed Journal Articles (37) Organization Report (23) Blog/News Article (7) Working Papers/Dissertations/Theses/Conference Papers (12) Book Chapters (11)
Geography:	Sub-Saharan Africa (37) South Asia (33) East Asia & Pacific (8) Latin America & Caribbean (4) Middle East & North Africa (1) Multiple (7)
Type of Shock:	Natural (56) Health (15) Conflict (10) Economic (7) Multiple (2)
Women's Groups:	Self-Help Groups (27) VSLA & Other Savings Group (26) Microfinance Groups (3) Collective Action & Grassroots Groups (4) ELA and other adolescent girls' groups (3) Multiple* (14) Unspecified (7) Other (6) *Frequently includes savings, lending, and/or advocacy components.
Organizing Purpose:	Financial (31) Health (5) Livelihoods (3) Multiple (43) Other (8)
Methodology:	Quantitative (17) Qualitative (52) Mixed Methods (15) Review (6)

Question	Yes	No
Peer Reviewed?	37	53
Discusses the effect of shocks on women's group activities and/or resources?	29	61
- If Yes: Positive (1) Negative (25) Neutral (1) Mixed (2)		
Discusses group response or adaptation to shock?	25	65
Discusses how group implementation features contribute to/shape adaptability and resilience of group in the face of shocks?	13	77
Discusses women's groups playing a role in community response?	37	53
Describes the role of women's groups in the resilience of members to shocks?	46	44
- Resilience Indicator: Food Security, Consumption Smoothing & Saving (15) Psychological/Mental State (8) Credit (1) Income & Economic Security, Employment & Migration (8) Composite Index (2) Pregnancy (2) Disaster Preparedness (1) School Enrollment & Attendance (3) Empowerment/Status (1) Height-to-Age Ratio (1) Access to resources/information (1)		
Includes evidence on the role of women's groups in the resilience of members to shocks AND methodology includes a comparison group?	20	70
- Resilience Indicator: Food Security, Consumption Smoothing & Saving (10) Psychological/Mental State (4) Credit (1) Income, Economic Security & Employment (4) Composite Index (2) Pregnancy (2) Disaster Preparedness (1) School Enrollment & Attendance (3) Height-to-Age Ratio (1) Access to resources/information (1)		

Quantitative and mixed methods research on the impacts of acute covariate shocks to women's groups—and any resilience that groups may provide to members—is sparse. The majority of the literature available is qualitative in nature, and few studies are peer-reviewed. Out of 90 documents included in our sample, we identified 37 peer-reviewed journal articles, of which 31 used a quantitative or mixed methods research approach.

4.1 How do Shocks Affect Women's Groups?

This section discusses evidence on the effects of shocks on women's groups activities and resources, features and adaptations through which women's groups may increase resilience to shocks, and how shocks may serve as the impetus for new women's groups.

The effects of shocks on women's group activities and resources, and group resilience

The evidence on the effects of acute covariate shocks on women's groups suggests consistently negative impacts on women's group resources and activities (25 out of 29 documents reporting on this research question indicated an adverse impact on group resources and/or activities), indicating that covariate shocks can adversely affect group resilience. Women's groups were unable to meet as frequently, ceased certain activities and services, and occasionally dissolved altogether (BARA & IPA, 2013; Heltberg et al., 2013; Bandiera, et al., 2019; Langlay, 2014; Pollard, 2003; Soares & Mullings, 2009). Some women's groups changed their group function and adapted their activities to support community responses to a covariate shock, such as engaging in emergency warning communications (Féron, 2020; Mulyasari & Shaw, 2014), information dissemination (CARE, 2020a), and implementation of rescue and relief programming (Mehta, 2009) – and this is discussed in greater detail in Section 4.3.

Covariate shocks tend to have deleterious effects on group resources and resilience due to the majority of members experiencing difficulty in contributing to group funds (i.e., through savings contributions or loan repayments) while simultaneously needing to draw upon group financial services such as credit and social insurance to cope with shocks (Androsik, 2020; Gash & Gray, 2016; Heltberg et al., 2013; Nayar & Faisal, 1999; Nannozi, 2019; Bermudez & Matuszeski, 2010; Atela, et al., 2018, Langlay, 2014). This drastic reduction in the supply of group resources, combined with a sudden increase in demand, may pose a serious challenge to group sustainability and resilience. For example, a study during the height of the HIV/AIDS epidemic in South Africa found that individuals were less likely to continue membership in informal risk sharing networks due to the increased likelihood that other group members would die before

repaying their loans (Linkow & Rentschler, 2016). Similarly, a women's group affected by an acute covariate shock faces a sustainability challenge if members perceive that the cost of group membership is not offset by the anticipated benefits of pooled resources.

Features and adaptations of women's groups to increase resilience to shocks

There is limited evidence specifying the ways in which certain group models or implementation features can contribute to the ability of the group, and/or its members, to withstand shocks, but the existing literature provides some insights into the importance of organizational linkages, flexible policies, and social capital. The primary indicator of a group's ability to persist and function during a covariate shock is the presence of a formal linkage between the women's group and NGOs, financial institutions, and/or other women's groups (Coppock & Desta, 2013; Demont, 2013, 2020; Khandker et al., 2015). Linkages to external financial services and resources allow for uninterrupted access to credit for group members, as the resource pool is not constrained to the shock-affected women's group; that is, the sudden increase in demand for resources during a shock does not threaten group sustainability because the linkage to an external organization prevents a simultaneous decrease in the resource supply.

We also found some evidence that women's groups adapted their policies around member contributions and share-outs in an effort to mitigate the impact of shocks. Some savings groups timed the share-outs to coincide with the beginning of the lean (pre-harvest) season (BARA & IPA, 2013; Brunie et al., 2014), while other savings groups implemented shorter loan cycles and new emergency funds to better cope with recurrent shocks (CARE, 2020a). Women's groups in India set up a new, banked resilience fund in Odisha after cyclone Fani (Ghosh, 2019), and the Self Employed Women's Association (SEWA) created a Livelihood Security Fund tailored to the needs of members living in disaster-prone areas of Gujarat, India (Benni & Barkataky, 2018). Another adaptation includes the implementation of increased flexibility around contribution amounts during a negative shock, but this adaptation highlights a possible tension between the resilience of groups (i.e., the group infrastructure and functioning withstanding the shock) and the resilience of group members (i.e., individual group members withstanding the shock). For example, Demont (2020) found that policies of compulsory savings were central to group resilience after covariate weather shocks, but Khandker, Khalily, and Samad (2015) found that more flexible policies (e.g., flexibility on loan repayment) were important for individual resilience during shocks.

Descriptions of women's groups' adaptation to shocks rarely speak to the implications of these adaptations, such as how these changes may alter the women's group implementation or effectiveness, or whether these adaptations are sustained after a crisis. A notable exception is Ray-Bennett (2010), who examined how a policy change that prioritized women's group resources for its most vulnerable members during a shock produced unintended adverse consequences, including group tension and conflict. After a major cyclone hit India in 1999, the NGO managing SHGs in the affected region implemented a policy known as a "vulnerability analysis" approach, which targeted group resources such as credit to poor group members over non-poor members of the same caste. While the intent of this approach was to promote equity, it resulted in the less vulnerable members exhibiting "extreme hostility" towards more vulnerable members that received priority. They "exerted extreme pressure" on the vulnerable recipients to deposit savings and repayments regularly regardless of their difficulties, and, if they failed, were met with "verbal abuse and fiery argument" (p. 252). Ultimately, the most vulnerable were unable to receive any further credit – which "reproduced and re-intensified local gender and class hierarchies, with more privileged women receiving far greater benefit than the poorer." (p. 253). SHGs that did not adopt the vulnerability analysis appeared to fare better than those that did, as this helped to "diffuse the pressure of the least vulnerable group members on the activities of the SHG" (p. 253). The findings of Ray-Bennett (2010) reveal that the implications of women's group adaptations to shocks is an important – yet understudied – topic in the literature.

Women's group respondents facing recurrent droughts in Northern Kenya also cited a number of factors important for group sustainability that are closely related to the social capital embedded in groups, including unity and social cohesion, transparency and accountability of group leadership, and the appropriate balance of incentives and discipline in order to "instill an ethos of shared rights and responsibilities" (Coppock and Desta, 2013, p. 100).

Shocks as an impetus for the formation of groups

We also examined how shocks may serve as the impetus for new women's groups to form. Women's groups may form organically after a shock as a way for members to provide psychosocial support to one another (Berry, 2015; Tol et al., 2020; Sim et al., 2019; Huang & Wong, 2013), to pool resources for survival (Tawodzera, 2012; Falk, 2014; Porter, 2001; Corbin & Hall, 2019), and to advocate for inclusion in community response (Clissold et al., 2020; Fordham et al., 2011).

In some cases, large covariate shocks such as natural disasters and war may attract NGOs to a region to distribute assistance. For example, BRAC started its operations in Bangladesh in 1972 as a small-scale relief and rehabilitation project to help refugees after the Bangladesh Liberation War of 1971 (Chowdhury & Bhuiya, 2004). Because many NGOs prioritize women in their aid response, an increase in NGO activity may produce an increase in the proliferation and activity of women's groups (Kruks-Wisner, 2011; Yonder et al., 2005). Kruks-Wisner describes how the Tamil Nadu state in India experienced “two tsunamis” – the initial Indian Ocean tsunami of December 2004, followed by “a wave of aid [that] pumped unprecedented amounts of aid, materials, and personnel into the affected region” (2011). Many of these newly-arrived NGOs worked with SHGs to provide support and connect women to government officials for advocacy purposes during the recovery process. The relationship between women's groups and NGOs is bidirectional, as NGOs may establish women's groups as part of their organizational response, and groups of women may start groups or formalize existing groups after a disaster in order to attract NGO partnerships. For example, after civil conflict in Liberia, many women organized into women's groups in an “entrepreneurial attempt” to access donor funding that prioritized disbursement to women (Fuest, 2008).

4.2 How Do Women's Groups Mitigate the Effects of Shocks for Members

We next reviewed the literature to assess the extent to which participation in women's groups is associated with member resilience during an acute covariate shock. We found 46 documents that included evidence on the role of women's groups in the resilience of members to covariate shocks. Most of this evidence (26 documents) consisted of qualitative interviews with group members and focused on member experiences, without comparison to a control population of non-group members or women without access to groups. These interviews do not provide quantifiable evidence of resilience, but the shared experiences of the women interviewed supply valuable detail and context often lacking in quantitative studies for how group mechanisms produce resilience. For example, women's groups that formed in the wake of the Rwandan genocide testified to the importance of the group for collective grieving and emotional support as a way to cope with the tragedy of lost family members and displacement (Berry, 2015). Members of economic SHGs stressed the importance of group membership in accumulating savings and group-based credit to better absorb economic losses due to natural disasters or rainfall shocks – that is, economic SHGs contributed to members' absorptive capacity (Coppock & Desta, 2013; Gash & Gray, 2016), and members of agricultural groups attributed their ability

to adapt to price shocks (i.e., adaptive capacity) to shared group storage resources and trainings from group-affiliated NGOs (Nannozi, 2019).

To address the empirical evidence on the extent to which women's groups increase resilience to shocks, we limited our analysis to studies with a control or comparison group. Table 2 depicts a summary of the included studies (n=20).

The majority of the studies (13 of 20) examined resilience to a weather shock. These weather shocks varied in terms of severity and acuteness, and this review includes evidence of groups providing resilience to seasonal hunger periods as well as to droughts, monsoons, and other climate disasters.

Resilience was most commonly measured using some indicator of consumption, such as changes in food security or household expenditures, and seven studies provided evidence that women's group member households tended to be better able to smooth consumption during covariate weather shocks than non-member households (Bahadur et al., 2016; BARA & IPA, 2013; Christian et al., 2019; Demont, 2013, 2020; Garikipati, 2008; Karlan et al., 2017). It is important to note that, while consumption tended to be higher for member households than non-member households, membership in a women's group seldom fully mitigated the effect of the weather shock. That is, the shock reduced consumption for all households, but member households experienced less of a reduction in consumption than non-member households; their increased absorptive capacity provided the ability to absorb more of the shock before reducing consumption. For example, Demont (2020) surveyed households in India about the number of months in the past year that households had to reduce food consumption, finding that households in villages with women's groups realized 59% less of a reduction in food security during a rainfall shock (compared to households in villages without women's groups). Christian, et al. (2019) found no significant impact of women's groups on food consumption in the year after Cyclone Phailin – but did find that households in treatment villages spent significantly more per capita (785 Rs) on non-food consumption after the shock. Women's group members also tended to have higher household income after weather shocks (Demont, 2020; Karlan et al., 2017; Wineman et al., 2017), as well as better disaster preparedness strategies than non-members – indicative of increased adaptive capacity (Story et al., 2018; Weingärtner et al., 2017; Yaron et al., 2018).

Table 2. Summary of Included Studies

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
Bahadur, A., Lovell, E., & Pichon, F. (2016). <i>Effectiveness in building resilience: Synthesis report for Oxfam's resilience outcome area</i> . Oxfam Research Reports. Retrieved from https://oxfamlibrary.openrepository.com/bitstream/handle/10546/620103/er-effectiveness-resilience-building-080216-en.pdf?sequence=1&isAllowed=y	Senegal (central area)	Farmers received comprehensive intervention, which included savings groups (as well as weather insurance, disaster risk reduction activities, access to credit, and agricultural support). Participants in savings groups were "primarily women." Impacts applied to the whole intervention; they were not attributable to savings groups alone.	Lean season in arid regions; high levels of climate-related food insecurity. Study conducted 2013–15.	Not specified.	Design not specified. Results given for beneficiary households and comparison households.	Coping Strategy Index (CSI): Measures how households cope with food shortages. Higher score means more frequent/intense coping mechanisms. Food Consumption Score (FCS): Reflects number of meals per day; higher percentage means more food consumption.	CSI: Both groups increased their strategies for coping with food insecurity challenges. Beneficiary households increased CSI scores by 1.7 percentage points, while comparison households increased CSI scores by 7.8 percentage points (no indication of statistical significance provided). Project households were more likely to use savings as a coping strategy (instead of borrowing, using credit, etc.). FCS: Both groups decreased food consumption, on average. Comparison households decreased FCS from 56% to 29% from 2013 to 2015, while project households decreased FCS from 59% to 54% (no indication of statistical significance provided).	Beneficiary households were more likely to use solar energy and to produce higher rice yields than comparison households, but it is unclear whether these outcomes were due to savings group participation.
Bandiera, O., Buehren, N., Goldstein, M. P., Rasul, I., & Smurra, A. (2019). <i>The economic lives of young women in the time of Ebola: Lessons from an empowerment program</i> . The World Bank. Retrieved from https://elibrary.worldbank.org/	Sierra Leone (Port Loko, Kambia, Moyamba, and Pujehun)	BRACs Empowerment and Livelihood for Adolescents (ELA). Club for girls (ages 18–25) to meet and gain livelihood skills, trainings, and reproductive health knowledge.	2014 Ebola outbreak. Villages were categorized as high or low Ebola-disruption villages (binary shock indicator).	2x2 factorial design—randomized controlled trial (RCT) for treatment, quasi-random for shock.	ELA randomly assigned to 150 villages; 50 control villages. Baseline data collected in early 2014 (start of outbreak); endline in 2016 (near end of outbreak).	School enrollment: whether or not a respondent was enrolled in school. Literacy skills: self-reported abilities to read simple text; reading comprehension;	ELA mitigated the impacts of Ebola disruption. For the younger cohort, school enrollment dropped 16.6 percentage points in highly disrupted control villages but declined only 8.1 percentage points in disrupted-treatment villages ($p < 0.1$). For younger girls, Ebola disruption reduced	The older cohort realized a significant increase in transactional sex and rape in high-disruption treatment villages (5.4 percentage

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
doi/pdf/10.1596/1813-9450-8760			Index score of disruption includes school and health facility closures or disruptions; villages with index score above 75th percentile scored as "high" disruption (17% of villages in sample).		Young cohort (ages 12–17) and older cohort (ages 18–25). $N = 4,790$ (17% attrition; no differential attrition of treatment group). Difference-in-differences (DD) analysis, interaction term for treatment*shock estimate.	writing complete sentences; etc. Aggregated and scaled on 0–100 index (average baseline score 24.6). Numeracy skills: self-reported abilities to perform basic counting; simple calculations; working with fractions; etc. Aggregated and scaled on 0–100 index (average baseline score). Out-of-wedlock pregnancy: from survey.	literacy (numeracy) scores by 12.1 percentage points (7.3%) in control villages, but ELA offset around 73% (99%) of these reductions ($p < 0.01$). For the older cohort, 93% of the loss in numeracy skills was offset by ELA ($p < 0.01$). Out-of-wedlock pregnancies rose by 7.2 percentage points in high-disruption villages, but this increase was completely mitigated in treatment villages ($p < 0.05$).	points), but there was no corresponding increase in pregnancy, which suggests that the treatment increased contraceptive knowledge and use.
Bandiera, O., Buehren, N., Goldstein, M. P., Rasul, I., & Smurra, A. (2020). <i>Do school closures during an epidemic have persistent effects? Evidence from Sierra Leone in the time of Ebola</i> . Retrieved from http://www.homepages.ucl.ac.uk/~uctpimr/research/ELA_SL.pdf (Follow-up to Bandiera et al. [2019])	Sierra Leone (Port Loko, Kambia, Moyamba, and Pujehun)	BRACs ELA. Club for girls (ages 18–25) to meet and gain livelihood skills, trainings, and reproductive health knowledge.	Same as Bandiera et al. (2019) but renames "high disruption" village to "high pregnancy risk" village.	2x2 factorial design—RCT for treatment; quasi-random for shock (DD analysis).	See info for Bandiera et al. (2019). Included additional round of data collection in 2019–20 of 2,852 respondents (~60% of original sample; no differential attrition of treatment group). Also included surveys of 1,368 partners of original sample.	Included follow-up data for school enrollment, contraceptive use, and pregnancy outcomes from Bandiera et al. (2019). Included additional partner characteristics (aversion to gender-based violence [GBV], education, etc.).	Short-term results are not substantively different from those reported in Bandiera et al. (2019). At follow-up: Highly disrupted villages had persistently lower enrollment rates and higher pregnancy rates than villages less impacted by Ebola. The ELA clubs also had positive effects on education after Ebola with a more limited fall in school enrollment post-pandemic in treatment villages than in control villages. For the older cohort, the positive treatment effect on	The survey of partners revealed more favorable traits among partners of treatment group women compared to control group women, but this analysis was not interacted with the disruption of the Ebola shock.

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							increased contraceptive use in disrupted villages remained statistically significant.	
Bureau of Applied Research in Anthropology & Innovations for Poverty Action. (2013). <i>Final impact evaluation of the saving for change program in Mali, 2009–2012</i> . Retrieved from https://www.freedomfromhunger.org/sites/default/files/SavingforChangeMaliResearchFullReportMay2013.pdf	Mali (Ségou)	Women-only groups, self-managed savings and credit groups (Saving for Change program). No external capital. Share-out timing often coincided with periods of high cash-flow requirements.	Lean period (beginning in May/June) is the only covariate shock that was quantitatively analyzed. Study period was 2009–12.	RCT.	500 villages randomly assigned to treatment or control. $N = 5,954$; households; included big households of multiple subfamily units and small households with one head of household. Baseline and endline surveys administered to full sample. Shock-specific analysis was conducted with high-frequency sample: 600 randomly selected women from both treatment and control groups. High-frequency sample was surveyed every 2 weeks or every 3 months, depending on survey group.	Food consumption: Measured with 1-week recall survey. Administered to high-frequency subsample. Frequency for this specific survey component is unclear: somewhere between every 2 weeks and every 3 months between June 2010 and January 2012. Food security: Adapted for high-frequency sample from 17-question Freedom From Hunger food security index. Three-month recall. Frequency for this specific survey component is unclear: somewhere between every 2 weeks and every 3 months between June 2010 and January 2012.	Food consumption: For the high-frequency sample, households in treatment villages experienced a smaller decline in food consumption during the lean season. This effect is statistically significant only for the subset of small households (not full sample or large households). That is, small households in treatment villages consumed, on average, 0.39 USD more than small households in control villages ($p < 0.05$). <i>Note.</i> Unclear unit/transformation for coefficient 0.39 USD.	No significant differences in food security index for treatment households during the lean season.

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Bass, J., Murray, S., Cole, G., Bolton, P., Poulton, C., Robinette, K., ... Annan, J. (2016). Economic, social and mental health impacts of an economic intervention for female sexual violence survivors in Eastern Democratic Republic of Congo. <i>Global Mental Health</i> , 3.	DRC (South Kivu)	Women-only village savings and loan associations (VSLAs); received training but no outside capital from nongovernmental organizations (NGOs).	Civil conflict (ongoing since 2004; study conducted in 2010). Conducted specifically among victims of sexual violence (SV) in conflict-affected communities.	RCT.	Study-eligible women (SV survivors; $n = 301$) participated in VSLAs alongside other women from community. VSLAs were randomized to immediate start (treatment) and wait-list controls. Outcomes measured with baseline/endpoint questionnaire. 17% attrition (per protocol analysis conducted).	Per capita food consumption: measured with 7-day recall survey, including food purchases and food produced by household. Internalized stigma: measured with survey; produced summary score of 0–3.	Per capita food consumption: 25% greater increase ($p = 0.01$) from baseline to endpoint for treatment group compared to controls (but control group still had higher expenditure in CDF at both time periods; highest consumption per capita is still < 1 USD). Internalized stigma: Both groups realized reductions in stigma, but women in treatment group reported more than 10% greater reduction in internalized stigma than those in control groups ($p = 0.038$).	Marginally significant results include women in treatment group having about 1.5 more animals for breeding and a smaller reduction (17%) in paid hours worked than women in control group. Nonsignificant outcomes: Mental health functioning and additional social outcomes.
Buehren, N., Chakravarty, S., Goldstein, M., Slavchevska, V., & Sulaiman, M. (2017). <i>Adolescent girls' empowerment in conflict-affected settings: Experimental evidence from South Sudan</i> . CSAE Conference Paper	South Sudan	Adolescent girls—BRAC Adolescent Girls Initiatives (AGI). Groups for socializing, livelihoods, and life skills training.	Conflict of December 2013 (affected about half the sample). Girls were affected if they answered "yes" to at least one of seven questions (house looted, household	RCT.	120 eligible villages were randomized to treatment or control. Cluster random sample of 35 girls from each village was surveyed. $N = 3,219$ baseline respondents (after dropping one area due to security concerns).	Employment: Several subcomponents, including any income-generating activities (IGAs), self-employment, wage employment, farm/non-farm self-employment, income, hours worked, control over earnings. School enrollment: binary variable (currently enrolled in school = 1).	Employment: Beneficial effects of program on employment were wiped out for girls affected by the conflict. School enrollment: Conflict led to 6.8 percentage-point decrease in control villages but no significant decrease in enrollment in treatment villages ($p < 0.1$).	Many other outcomes examined (human capital, food security, assets, empowerment, savings, gender roles, etc.). No meaningful differences between treatment and control groups

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			member died, etc.).		Baseline survey in 2010. Extensive attrition resulted in random cross-section endline in 2014–15 (not same girls as baseline). $N = 2,273$ endline respondents; $n = 1558$ who answered all relevant survey questions. Intention-to-treat (ITT) impact estimated using endline cross-section only; model included interaction conflict*treat. Model tested program impact for 40 outcomes; no correction for multiple hypothesis testing.			for conflict-affected girls.
Christian, P., Kandpal, E., Palaniswamy, N., & Rao, V. (2019). Safety nets and natural disaster mitigation: evidence from cyclone Phailin in Odisha. <i>Climatic Change</i> , 153(1–2), 141–164. Retrieved from	India (Odisha)	Women-only SHGs (formed by Targeted Rural Initiatives for Poverty Termination and Infrastructure and the National Rural Livelihoods Mission); SHGs were federated	Cyclone Phailin (October 2013). Rainfall shock measured continuously as natural log	Quasi-experimental (non-random assignment). Triple difference model to	Assigned to treatment versus comparison at village/community level. Baseline balance table suggests comparability.	Food consumption: Followed the Indian National Sample Survey. Non-food consumption: Followed the Indian	Food consumption: No significant difference between treatment and comparison households similarly impacted by shock; group membership did not mitigate reductions in food expenditure after Phailin.	Large but nonsignificant coefficient on expenditures for women's goods suggests that group membership

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https://doi.org/10.1007/s10584-018-02364-8		and linked to external public/private services.	of deviations from monthly historical median rainfall (validated with use of surveys about flooding, etc. during Phailin).	estimate ITT effect.	Baseline survey in 2011 and endline survey in 2014 ($N = 2,874$ households). Twenty outcomes examined; no correction for multiple hypothesis testing.	National Sample Survey.	Non-food consumption: Households in treatment villages spent, on average, about 785 rupees more per capita than comparison households ($p < 0.05$). That is, group membership offset the decline in non-food expenditure after Phailin.	may "buffer" some of the reduction in this category. No significant differences in other categories of expenditures. Significant increase in number of current loans held by treatment households. Of six civic engagement outcomes, one was significant: Women in treatment villages were more likely to be aware of the last village council meeting.
De, S. (2011). <i>The whims of Indian monsoons: Long-term health consequences of early childhood exposure to the Indian drought of 2002</i> . Young Lives Student Paper. Retrieved from https://www.younglives.org.u	India (Andhra Pradesh)	Targeted program (IKP) to extend SHGs to rural poor women (below the poverty line). Program is government-sponsored, and SHGs are bank linked.	Drought of 2002 (driest monsoon season since 1960). Districts were scored as having been affected	Longitudinal analysis; non-random assignment to treatment. Panel data (three waves) analyzed with	Six (poorest) of 22 districts were enrolled in program during drought (not random). These six districts composed	Health status: World Health Organization height-for-age (HAZ) z-score.	Health status: The drought had significant negative impacts on both treatment and comparison groups (more severe for younger cohort). The coefficient on the interaction term of drought *	

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k/sites/www.younglives.org.uk/files/YL-SP-De_MPhilDissertation-2011.pdf			by the drought if rainfall was at least 20% deficient from long period average (shock is binary variable).	differenced Gaussian mixture model (GMM) model.	treatment group; other 16 districts served as comparison group. Three waves of Young Lives survey (2002; 2007; 2009–10) collected anthropometric data on children. Balanced panel: Young cohort (born 2001–02): $N = 1,259$. Older cohort (born 1994–95): $N = 802$. Approximately 30% attrition (non-random attrition with no correction, but author sees no evidence of attrition bias on outcome data). Differenced GMM model with twice-lagged health status to estimate impact of household having access to IKP program during drought.		program is positive but not significant.	

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
<p>Demont, T. (2013). <i>Poverty, access to credit and absorption of weather shocks: Evidence from Indian self-help groups</i>. CRED Working Paper.</p> <p>Demont, T. (2020). <i>Coping with shocks: The impact of self-help groups on migration and food security</i>. Retrieved from https://halshs.archives-ouvertes.fr/halshs-02571730/document</p>	India (Jharkhand)	Women-only SHGs; bank linked	<p>Rainfall shock (2004–09). Measured as a continuous variable; standardized difference from norm. A 1 standard deviation (SD) reduction in rainfall (drought) resulted in an average loss of over 50% of agricultural yields.</p> <p>Rainfall shock (2004–09). Measured as a binary variable. Shock is present if rainfall was at least 0.5 SDs below norm (contrast with Demont, 2013).</p>	Quasi-experimental (self-selection into treatment). Random selection of households analyzed using DD model.	<p>Women self-selected into SHGs, which existed before study. Study participants were randomly selected (half from a pool of SHG members; half from non-members) from within a stratified random sample of villages. A random sample of households from comparison villages (no SHGs) was also included. Total sample size was 1,080 households. Three rounds of household panel data analyzed through DD technique.</p> <p>Same sample as Demont (2013). In the 2020 study, treatment is defined as a household within a treatment village instead of a household participating in an</p>	<p>Food consumption: Measured with 1-week recall survey, administered right after harvest (when households were likely to have extra)</p> <p>Food security: Annual survey asks household to recall each month of past year: In month X, could all household members enjoy three meals per day?</p>	<p>After years with a negative rainfall shock, households in comparison villages lost, on average, 1.6 months of adequate food, while households in treatment villages lost 0.9 months on average. That is, households in treatment villages realized a 59% reduction ($p < 0.05$) in loss of food security during a rainfall shock.</p> <p>This study relied on the same data from Demont (2013); significant results here may not be robust to operationalization of shock/outcome. This is shown in the results from 2013: There is no direct effect of SHG membership on food consumption smoothing, likely due to survey timing (administered after harvest). However, the authors found that SHG members increased their probability of borrowing by 16% during a standard reduction in rainfall, while non-members decreased their probability of borrowing by 50%. This result indicates that SHG members may have better access to credit during weather shocks.</p>	<p>Households in treatment villages were 35% more likely to migrate for work (and realized over a 40% increase in migration income or remittances) in the year after a rainfall shock than households in comparison villages.</p> <p>Treatment households had a higher probability of borrowing during a rainfall shock, indicating that SHG members may have better access to credit during weather shocks.</p> <p>SHG members are more likely to diversify their agricultural income over time by growing</p>

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					SHG (contrast with Demont, 2013).			vegetables. Growing vegetables requires higher initial expenditures but yields higher value and lower risk; however, the study contains no direct measure of income smoothing through diversification during shock.
Garikipati, S. (2008). The impact of lending to women on household vulnerability and women's empowerment: Evidence from India. <i>World Development</i> , 36(12), 2620–2642. Retrieved from https://doi.org/10.1016/j.worlddev.2007.11.008	India (Andhra Pradesh)	Women-only SHGs; bank linked	Drought (2001–02). Respondents were asked about their vulnerability during “the last drought.” Drought as a shock is not measured quantitatively; it is perceived by the respondent.	Not specified.	Study design not specified. Surveyed 117 households (participated in SHG) and 174 comparison households in 2001; surveyed again in 2002. Sample included only married-couple households, and male/female respondents were chosen at random. Surveys were used to	Drought-related vulnerability: self-perceived ability to meet needs. Points were given for each type of need the household was able to meet during the last drought (e.g., all food needs, health needs), as well as if the household avoided selling assets and expected to cope similarly in next drought. Instrument was then collapsed into binary indicator for vulnerable/not	T-test revealed significant difference in means of drought-related vulnerability between treatment and comparison households. 40% of treatment households were not vulnerable compared to 26% of comparison households ($p < 0.05$). Logit regression shows that duration in program is associated with higher probability of no vulnerability.	Treatment households were more likely to have livelihood diversification. Participation in SHGs is also associated with lower levels of women's empowerment, sometimes referred to as the “impact paradox”.

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					construct binary vulnerability and empowerment indicators. T-tests determined significant differences in means.	vulnerable, with cutoff around lowest 30th percentile.		
Jahns, E. (2014). <i>Savings groups, shocks and coping strategies: The case of poor rural households in El Salvador</i> (Doctoral dissertation, Fletcher School of Law and Diplomacy, Tufts University).	El Salvador (rural eastern; communities with high poverty rates)	Savings groups facilitated by NGO as part of larger intervention involving agricultural training and resources. Most groups consisted only of women, some had only men, and some were mixed. Some groups also incorporated emergency funds and/or loans. No groups received outside capital.	High global market prices and bad harvests in 2010 led to the Hungry Season of 2011.	Non-random assignment to treatment; non-random selection into study. Comparison communities chosen for matching characteristics. Linear probability model used to estimate association of treatment community with outcome.	Case study with mixed-methods nested design. Thirteen communities selected for maximum variation (eight with savings groups; five comparison selected on matching characteristics). Heads of households from each community randomly selected for study. Qualitative interviews conducted in 2010–11 to structure quantitative survey instrument administered in 2012. Linear probability model	Successful coping: Binary variable. A household coped successfully with the hungry season of 2011 (April–August) if no one in the household experienced hunger in the previous 12 months (surveyed in 2012).	The coefficient on savings groups was consistently positive: Households in communities with savings groups were 6.5 to 9.5 percentage points more likely to cope successfully with the shock (depending on choice of model). However, significance of the coefficient is marginal at best and varies with choice of model covariates.	Poorer households were 2.7 percentage points more likely to have successful coping strategies (marginally significant; not robust for model with community-level controls). Household heads with at least 1 year of schooling had a 9.9 percentage-point increase in probability of having successful coping strategies ($p = 0.045$).

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
					used to estimate association between living in community with savings groups and successful coping strategies. <i>N</i> = 276 households.			
Kaboski, J. P., & Townsend, R. M. (2005). Policies and impact: An analysis of village-level microfinance institutions. <i>Journal of the European Economic Association</i> , 3(1), 1–50. Retrieved from https://doi.org/10.1162/1542476053295331	Thailand (rural and semi-urban)	Microfinance institutions (multiple types). Production credit groups (PCGs) are less likely to contain the poorest in a village but more likely to consist of mostly women. PCGs operate like VSLAs; may receive start-up capital but are not linked to larger intermediation network. Women's groups overlap in saving/lending functions with PCGs but usually also contain a training/livelihoods element for example with a focus on rice banks and buffalo banks.	A “bad year.” Year is identified through household self-report—lowest income year in last 5 years (1992–97). Unclear whether this represents covariate shock.	Non-random assignment to treatment. Cross-sectional survey of random selection of households. Two-stage least squares (2SLS) and maximum likelihood estimation (MLE) models used to estimate association of microfinance institution with outcome.	Cluster random selection of 192 survey villages, 15 households from each village (<i>n</i> = 2880). Household survey administered in May 1997 (cross-sectional). 2SLS and MLE models constructed to measure association of microfinance institution with likelihood of reducing consumption. Multiple variations of institutions tested; no correction for multiple hypothesis testing.	Reduced consumption/input use: Households were asked to identify the worst income year in the past 5 years and indicate whether they had to reduce consumption or inputs for that year.	Households in villages with microfinance institutions that offered savings services were 12 to 18 percentage points less likely to reduce consumption in a bad year (though significance was not robust to specific savings service evaluated). Analyses focusing only on women's groups or PCGs (instead of lumping all microfinance institutions together as the “treatment”) did not produce significant differences with regard to consumption smoothing in a bad year.	Households in villages with microfinance institutions that offered emergency services were 20 percentage points less likely to reduce consumption in a bad year.

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
Karlan, D., Savonitto, B., Thuysbaert, B., & Udry, C. (2017). Impact of savings groups on the lives of the poor. <i>Proceedings of the National Academy of Sciences</i> , 114(12), 3079–3084. Retrieved from https://doi.org/10.1073/pnas.1611520114	Ghana, Malawi, Uganda (pooled RCTs)	Mostly women VSLAs established by NGOs. Not linked to outside capital.	Drought (2009–11). Annual rainfall less than 1 SD below average for 12 months before endline survey. Only a subset of villages experienced the shock (none in Ghana).	Cluster RCT.	Cluster RCTs (pooled across three countries). Stratified random assignment of 561 village clusters to treatment or control. Households randomly selected ($N = 15,221$). Baseline and endline surveys, studies conducted over a period of 22 to 30 months. Pooled model with ITT estimates, adjusted for multiple hypothesis testing.	Food security: Index composed of five binary indicators, 12-month recall (adult/child reducing food intake adult/child going a full day without food, borrowing food). Income: Self-reported revenues minus expenses for all IGAs carried out by the household in the 12 months before the survey.	No significant impacts when adjusting for multiple hypothesis testing. Food security: Drought significantly reduced food security for control households by 0.119 SD (adjusted $p < 0.05$), but there was no significant difference between treatment and control households (adjusted $p = 0.26$). Income: After the drought, treatment households had, on average, 26.40 USD more in income than control households, but statistical significance disappears when adjusting for multiple hypothesis testing ($p < 0.1$; adjusted $p = 0.26$).	No significant differences between treatment and control groups for business outcomes, asset index, per capita consumption, or community participation index. Women's empowerment: For households not experiencing a shock, the treatment group displayed increases in women's empowerment. However, for households experiencing drought, the coefficient on women's empowerment was negative for treatment households (-0.119 SD; $p < 0.05$).

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
								adjusted $p = 0.26$).
Ksoll, C., Lilleør, H. B., Lønborg, J. H., & Rasmussen, O. D. (2016). Impact of village savings and loan associations: Evidence from a cluster randomized trial. <i>Journal of Development Economics</i> , 120, 70–85.	Malawi (northern rural)	Gender of groups not specified. VSLAs, no access to outside capital. Article stresses that common VSLA policy is to time the share-out to periods in which households are likely the most resource constrained.	This paper does not focus on a shock, but one outcome of interest is the length of the "hungry period," a lean season in which household members eat fewer than three meals per day. Data were measured in 2009 and 2011; no discussion of how the hungry period during this time frame compares to average.	Cluster RCT.	Cluster RCT. 46 villages randomly assigned (within strata) to either treatment (NGO-implemented VSLAs) or wait-list control. Baseline and endline household surveys ($n = 1,775$ households). 45% of treatment households participated in VSLA; 21% of control households participated in VSLA (spillover). 3% attrition. Outcomes of interest were assessed with four different ITT model specifications (mean difference, lagged, DD, first-difference). P -values corrected for multiple hypothesis	Length of hungry period: How many months in the past year did household members eat fewer than three meals per day?	There was no significant impact on the length of the hunger period.	The paper examined the impact of VSLA participation on a number of different outcomes, but none of the other outcomes was associated with a shock.

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
					testing. Sample was balanced at baseline.			
Story, W. T., Tura, H., Rubin, J., Engidawork, B., Ahmed, A., Jundi, F., . . . Abreha, T. H. (2020). Social capital and disaster preparedness in Oromia, Ethiopia: An evaluation of the "Women Empowered" approach. <i>Social Science & Medicine</i> , 257, 111907. Retrieved from https://doi.org/10.1016/j.socscimed.2018.08.027	Ethiopia (Oromia)	Project Concern International's Women Empowered approach. Women-led VSL; included programming on empowerment and business skills. Does not appear to have included linkages to external capital.	Residents had been affected by 2015–16 drought (one of the worst droughts on record). Study conducted in 2017. Exposure to past shock measured as binary indicator of any loss of income in last 3 years due to a disaster (> 90% respondents exposed). Also included binary indicator if whole household migrated in search of pasture/water.	Quasi-experimental (self-selection into treatment). Cluster random selection of sample. T-tests and Poisson regression used to compare outcomes between groups.	Study district contained eight treatment villages and 19 comparison villages (not randomly assigned). Random selection of 29 women's empowerment groups within eight treatment villages, followed by random selection of 10 to 11 women from each group (self-selection into groups). In comparison villages, random selection of 10 villages and 28–30 women from each village. $N = 589$. Survey administered in July 2017. T-tests used to compare treatment and comparison for preparedness outcomes.	Whether or not household had taken actions to prepare for a disaster: single survey question; actions included diversification, insurance, savings, etc. Binary variable. Self-perceived preparedness: Survey asked, "How prepared would you say you are for a major natural or man-made disaster in your community?" Those who reported "not prepared at all" were coded as 0; all other levels of preparedness were coded as 1.	Preparedness actions: In a model with no covariates, preparedness actions were 37% more prevalent among women in the treatment group ($p < 0.01$). However, this finding was not significant in models controlling for social capital and respondent characteristics. Self-perceived preparedness: In a model with no covariates, self-perceived preparedness was 52% more prevalent among women in the treatment group ($p < 0.01$). However, this finding was not significant in models controlling for social capital and respondent characteristics.	The study also examined the mediating role of social capital in disaster preparedness. Emotional support may have been an important mediator in the relationship between group membership and perceived preparedness.

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
					Poisson regression used to control for shock exposure (and other covariates).			
Tol, W. A., Leku, M. R., Lakin, D. P., Carswell, K., Augustinavicius, J., Adaku, A., . . . van Ommeren, M. (2020). Guided self-help to reduce psychological distress in South Sudanese female refugees in Uganda: A cluster randomised trial. <i>The Lancet Global Health</i> , 8(2), e254–e263. Retrieved from https://doi.org/10.1016/s2214-109x(19)30504-2	Uganda (refugee settlement in North)	Refugee women (South Sudanese) with at least moderate psychological distress (many exposed to high levels of GBV). Women assigned to groups of 20–30 to receive Self Help Plus intervention. Facilitator-guided intervention was delivered as a group workshop but also contained individual components (meeting with community health worker). Intervention consisted of five weekly workshop sessions.	Conflict in South Sudan (ongoing; study conducted in 2017). Female refugee population with high levels of post-traumatic stress disorder from exposure to GBV and conflict.	Cluster RCT.	Fourteen villages randomly assigned to either treatment or control; 40–60 households randomly selected within each village. $N = 694$ women. Participants were surveyed at baseline, immediately after 5-week intervention, and at 3-month follow-up. 10% attrition (not differential; listwise deletion from analysis).	Psychological distress: Kessler 6-item scale. Scores ranged from 0–24. 5 is cutoff for moderate distress, 13 for severe.	Psychological distress: K6 scores were lower, on average, for both treatment and control groups over time. At week 6 (immediately after intervention), women in treatment group scored, on average, 3.25 percentage points lower on the K6 than women in control group ($p < 0.001$). At 3-month follow-up, women in treatment group scored, on average, 1.20 percentage points lower than women in control group ($p = 0.04$). Subanalysis of women with severe distress (scores of at least 13 on K6) showed significant reduction in proportion of treatment group scoring in the “severe” category at week 6 and at 3-month follow-up. Due largely due to fewer women in treatment group deteriorating than in the control group.	At 3-month follow-up, treatment was also associated with improved outcomes on post-traumatic stress and depression symptoms, explosive anger, and functional well-being.
Weingärtner, L., Pichon, F., & Simonet, C. (2017). <i>How self-help groups strengthen resilience: A study of</i>	Ethiopia (Ofa and Kindo Koysha)	NGO established SHGs, broad range of activities that included savings and loans. No start-up capital;	Residents had been affected by 2015–16 drought (one	Non-random assignment to treatment; non-random	Non-random selection of study participants (SHG members and	Themes of qualitative interviews included reliance on predatory lenders, risk	No quantitative results. Interviews revealed that SHGs provided a way to avoid predatory lenders and that	SHG members appeared to be more prepared than non-

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
<i>Tearfund's approach to tackling food insecurity in protracted crises in Ethiopia.</i> Overseas Development Institute (ODI) Report. Retrieved from https://www.odi.org/sites/odi.org.uk/files/resource-documents/11625.pdf		linkages to external capital not apparent for this study site. Marginalized women were specific target, but groups also included men.	of the worst droughts on record). Study conducted in 2017.	selection of sample. Cross-sectional, qualitative study.	non-members) from nine study villages ($n = 252$). Qualitative interviews and surveys conducted in 2017 (cross-sectional).	diversification, and shock resilience.	SHG members were better off than non-members in a drought. Diversification in food-supply structures seemed to contribute to higher food security for SHG members. SHG members were also more likely to store foodstuffs or accumulate savings.	members for future shocks. SHG ability to combat covariate shock was limited because communal resources were strained; draining communal resources during a drought meant less for productive use later. SHG membership is not a replacement for formal social protection during a shock.
Wineman, A., Mason, N. M., Ochieng, J., & Kiriimi, L. (2017). Weather extremes and household welfare in rural Kenya. <i>Food Security</i> , 9(2), 281–300.	Kenya (southern rural)	Gender not specified. Membership in savings group was coded as 1 if any member of the household belonged to a savings group.	Rainfall, temperature, and wind shocks from 2000–07. Measured as cumulative days over/under thresholds (e.g., cumulative wind speed	Non-random assignment to savings group. Longitudinal panel regression, with household fixed effects.	Longitudinal household panel survey (2000, 2004, 2007) alongside weather data. Household outcomes were examined, with participation in a savings group examined as a mitigating factor in rainfall deficits (no	Household poverty status: binary variable indicating whether household was below the poverty line for rural Kenya (income/AE/day ≤ 67 Kenyan Shilling) Household income: income per adult equivalent (AE) per day, measured in	Membership in a savings group had a positive but nonsignificant effect on whether or not a rainfall deficit pushed a household below the poverty line (-0.07 ; $p = 0.16$). Membership in a savings group was associated with significantly higher household income during a rainfall deficit (coefficients not reported).	Access to credit was also a significant mitigating factor, but paper does not specify group-based informal credit.

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
			days over 5 m/s). Low rainfall was found to be more consistently severe than higher rainfall.		random assignment). $N = 1,264$ households. <i>Note.</i> Study design was to measure effect of weather shock on household; not designed to identify impact attributable to savings group.	Kenyan shillings (Ksh).		
Yaron, G., Wilson, D., Dumble, S., & Murphy, B. (2017). Measuring changes in household resilience as a result of BRACED activities in Myanmar. London, UK: Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED). Retrieved from https://www.itad.com/wp-content/uploads/2018/05/DFID-BRACED_EA3-Impact-Evaluation_Myanmar_Final_Shared.pdf	Myanmar	BRACED implemented Community Resilience Assessments (CRAs) that included VSLAs, trainings, and infrastructure. Impacts were estimated for entire intervention and not attributable to VSLAs alone.	Study set in multihazard context. Impact of past climate shocks was still felt, and future shocks are anticipated to grow worse. Most households reported exposure to shock in last 10 years at baseline; < 20% households reported exposure to shock between	Non-random assignment to treatment. DD model to estimate impact of treatment on outcome.	Stratified random sample of households in treatment and comparison communities. Comparison communities selected based on geographic proximity and criteria similar to those of treatment areas. Baseline (2015) and endline (2017) household surveys. $N = 2168$, 7% attrition (not different for treatment or comparison; slightly different	Resilience index: Composite index of five resilience dimensions, measured with 30 questions on household survey. Produced continuous score between 0–1.	Households in treatment villages realized, on average, an 18% increase in overall resilience index scores, while households in comparison villages realized a 14% increase ($p = 0.002$). In a subsample ($n = 400$) of individual intervention components, VSLAs showed significant impact on improved resilience scores in two of eight villages (nonsignificant results in six of eight).	Female-headed households and households with more assets tended to benefit more from intervention (this was not measured specifically with respect to experiencing a shock). No indication that intervention increased food security.

Citation	Country	Women's Group Intervention	Shock	Identification strategy	Design	Key outcome measures (describe)	Key results	Other results
			baseline and endline.		for outcome). Impact on outcome (composite resilience index) estimated using DD analysis.			

However, two studies using food security and nutrition-related outcomes found no evidence that membership in a women's group provided benefits during a weather shock. One study examined the length of time households subsisted on less than three meals per day and found no difference between the treatment and control group (Ksoll et al., 2016). The other study found no significant benefit of group membership amongst households, when examining child development outcomes several years post-drought (De, 2011).

Three studies in sub-Saharan Africa provide mixed results on the ability of group membership to increase resilience to conflict shocks. Victims of conflict-related sexual violence participating in VSLAs in the DRC realized group benefits of increased food expenditure and decreased internalized stigma, but the study found no statistically significant differences between group members and non-group members for additional mental health and economic outcomes (Bass et al., 2016). Similarly, adolescent girls living in the midst of conflict in South Sudan did not achieve the economic outcomes the group was designed to provide, but they did enroll in school at higher rates post-conflict than non-group adolescents (Buehren et al., 2017). Neither of these two studies focused on groups specifically designed to mitigate the effects of these conflict shocks, but a third study conducted after civil unrest in Uganda measured the effect of interventions with specific mental health programming by newly formed groups and found that women in these group-based interventions had less psychological distress and better mental health than women in the comparison group (Tol et al., 2020).

This review also includes two studies on the importance of access to savings and credit through women's groups during price shocks, as well as a study of adolescent girls' groups during the Ebola outbreak (detailed in Section 4.4). During a year of high price volatility, members of savings groups in El Salvador were 9.5 percentage points more likely to avoid experiencing hunger than non-member households (Jahns, 2014). Likewise in Thailand, households in villages with microfinance groups were better able to smooth consumption than control villages in periods of widespread economic hardship (Kaboski & Townsend, 2005).

During shocks to income and resources, access to group-based credit is an important mechanism for a household's absorptive capacity, as credit can help to smooth consumption, reduce asset loss, and allows borrowers to avoid predatory lenders (Weingärtner et al., 2017), especially when credit conditions are flexible (Khandker et al., 2015). However, as described in

the previous section, covariate shocks may deplete group resources to the extent that loans are not available to members – especially if the group is not formally linked to a broader network or a financial institution (Demont, 2013; Gash & Gray, 2016). In cases where group-based credit is not available during a covariate shock, the savings and information sharing mechanisms of women's groups may be paramount (Karlan et al., 2017). The accountability and regular commitment of savings groups ensure that members have greater absorptive capacity through accumulated savings, while access to information networks about crop diversification strategies and labor opportunities allows members to increase their adaptive capacity by smoothing income during shocks (Demont, 2013, 2020; Karlan et al., 2017). Mechanisms of shifting gender norms, empowerment, and collective action and mobilization may contribute to the transformative resilience of women's group members during shocks (Gram et al., 2019), which is described in more detail in Section 4.3.

However, the literature also revealed certain limitations with regard to the ability of women's groups to contribute to individual resilience during a shock. Women's groups may not benefit all members equally, and improved resilience for member households does not always equate to improved resilience for the woman herself. There are very few subgroup analyses in the reviewed studies, and we know little about the potential differential impacts of women's groups on members. Compulsory savings may also reduce the ability of the poorest women to join groups even when this mechanism contributes to increased member resilience. Additionally, Garikipati (2008) and Karlan, et al. (2017) find that group-attributable improvements in household resilience may coincide with decreases in women's empowerment outcomes around household decision-making and control of productive assets. Finally, the most vulnerable women in a community may be excluded from or forced out of groups due to negative perceptions of the poor (Hossain & Rahman, 2018). These findings caution against the idea of interventions with women's groups as sufficient to equitably support member resilience without addressing structural inequities.

4.3 How Do Women's Groups Support Community Responses to Shocks?

We found consistent evidence of women's groups playing a role in the community response to a shock. The literature revealed diverse examples of women's groups partnering with a broad range of stakeholders to support all stages of responses to various shocks. In particular,

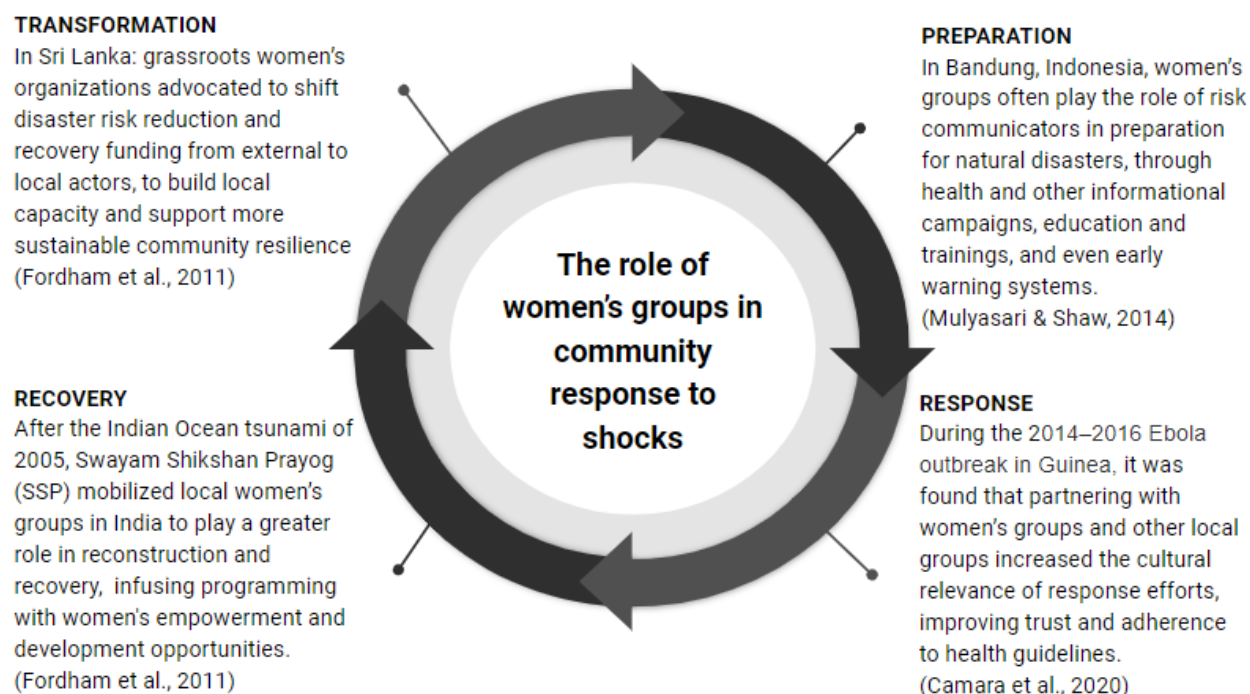
women's groups had the ability to organize and empower women to advocate for more inclusive resilience policies that are better aligned with women's priorities (Clissold et al., 2020), highlighting their potential role in transformative resilience through systemic change.

Women's groups have supported multiple stages of community response to a shock: from preparation and disaster risk reduction, to immediate response and relief efforts, to reconstruction and recovery, and finally by advocating for transformational change (see Figure 1). This includes both pre-existing women's groups, which often serve as valuable human infrastructure in the face of a shock, as well as new women's groups that form to mobilize women to respond to a shock in their community. After large natural disasters in South Asia, women's groups actively participated to rebuild and rehabilitate their community – by setting up relief camps (Nambiar, 2016), taking charge of large community kitchens for the displaced (Shaji, 2020), holding household cleaning drives after floods (Anandan, 2018), providing psychological counselling to the bereaved (Anandan, 2018), and contributing significant sums of money from their savings to give into the rebuilding of their community infrastructure (Anandan, 2018). We found that many types of local organizations that center women, inclusive of small lending groups as well as large, networked advocacy organizations, engage with a broad range of stakeholders in these community efforts, including by forming advocacy coalitions with women's rights organizations (Fisher, 2009; Fordham et al., 2011), serving as government partners and implementers (Yonder et al., 2005), partnering with local and international NGOs (iNGO) (Fordham et al., 2011) and working with multilateral institutions such as the UN (Brickman Raredon, 2011).

The literature cites several locally relevant communication, implementation, monitoring, and advocacy roles that women's groups can play in community responses to shocks. Women's group connections to their communities mean that they “are talented in gathering local information that is difficult, if not impossible for outsiders to access” (Yonder et al., 2005, p. 35). Involving women's groups in community responses can also increase the cultural relevance of programming, bolstering community trust and leading to an improved response (Camara et al., 2020). In their role as implementers of shock response programming, they can “function as intermediaries between their communities and the government in a manner that improves the speed, quality, and accountability of the government programs” (Yonder et al., 2005, p. 35). They can also support monitoring of a response to a shock – including everything from tracking incidents of gender-based violence in shelters (Fisher, 2009), to outbreak surveillance and reporting (Deepa et al., 2008), to ensuring resources are allocated appropriately to those most

in need (Yonder et al., 2005). Finally, grassroots women's organizations appear to play an important advocacy role in ensuring government and INGO programming best supports women and their communities (Fordham et al., 2011).

Figure 1. The role of women's groups in the stages of community response to shocks



However, women's advocacy organizations, grassroots cooperatives, and federations of savings and credit groups have reported a lack of meaningful involvement in national disaster responses. Across 21 interviews of women's advocacy organizations in Latin America, South Asia, and sub-Saharan Africa, Oxfam found that the majority felt "sidelined" from disaster response and recovery initiatives due to "perceived lack of technical capacity and reach", as they "had never been consulted by aid agencies on resilience and disaster preparedness strategies, and had no contact with government and nongovernmental actors in charge of disaster response and recovery initiatives" (Ravon, 2014, p. 17). Other sources corroborate this finding, as Goetz and Jenkins (2016) found multiple instances of the UN excluding women's groups in the conflict resolution and peacebuilding processes, and Enarson, Fothergill, and Peek (2007) found that women and women's grassroots organizations are often not in positions of authority during disaster relief and recovery. Gupta and Leung stated that "successful partnerships between grassroots women's organizations and government agencies... are exceptions rather than the norm" in disaster risk reduction and recovery, and that typical

programs such as aid and training too often “reproduce rather than redress women’s marginalization and vulnerabilities” (2011, p. 25).

As a result, these and other authors call for more meaningful partnerships with, and investments in, organizations that work with women, which include community-base, small groups such as VLSAs, as well as networks or federations of such groups, NGOs/INGOs that work with women’s networks and women’s rights/advocacy organizations. They cite the potential of such partnerships to reduce the perpetuation of gender inequity (Gupta and Leung, 2011) through building local capacity instead of relying upon external expertise, by supporting the ability of local women to be “permanent active agents of resilient development” (Fordham et al., 2011, p. 65). Thus, our findings suggest that there is room for greater inclusion of women’s groups in community, government, and NGO response to shocks – and that this has the potential to support community resilience.

4.4 Spotlight on Women’s Groups and Ebola

The Ebola epidemic from 2014-2015 had a catastrophic impact on Village Savings and Loan Associations (VSLAs) in Liberia, including absenteeism and cessation for VSLA meetings and activities, a decrease in the amount of contributions and resultant reduced funds available for loans, and – ultimately – the suspension of all VSLA activities (Langlay, 2014). Men who were able to borrow money in Liberia during the crisis mostly did so through informal sources, such as family and friends, while women primarily relied on credit offered by savings clubs and *susu clubs*, as other formal financial services were closed down (Korkoyah & Wreh, 2015). In Sierra Leone, the burden of the Ebola shock decreased group members’ ability and propensity to contribute savings – which, in turn, put pressure on the group’s social fund, despite it being needed for expenses related to burial and the care of orphaned and vulnerable children (Androsik, 2020). However, while the Ebola epidemic has highlighted the vulnerability of women’s savings groups to shocks, it has also shown their resilience – as many VSLA group members in Liberia remained steadfast in their commitment to their group throughout the crisis (Langlay, 2014).

Women’s groups adapted their activities, services, and roles in response to Ebola outbreaks in various ways. In Liberia, the financial savings and loan activities of VSLAs were disrupted, but groups naturally evolved to serve as important sources of psychosocial support to members during this period of extreme loss and grief (Langlay, 2014). In response to recurrent conflict

and the Ebola crisis in the Democratic Republic of the Congo, VSLAs experimented with a “resilient VSLA model” to better cope with recurrent shocks that included shorter loan cycles, new emergency funds, and facilitating membership for displaced women (CARE, 2020a). Women’s groups also adapted to play a role in the community response to Ebola in the DRC, where the World Health Organization trained women’s group representatives to spread awareness and share information in 30 Beni neighborhoods about vaccines, contact tracing, treatment, and the vulnerability of women and children to the disease (WHO, 2018).

The only study we found of groups contributing to member resilience during the Ebola outbreak that was able to credibly establish causality focused on the effectiveness of the Empowerment and Livelihood for Adolescents (ELA) intervention using a cluster-randomized controlled trial in Sierra Leone (Bandiera et al., 2019). The Ebola outbreak occurred in the midst of the intervention and varied in severity across intervention locations. Thus, the authors were able to measure the mitigating impact of belonging to an ELA group during Ebola. The study found that group membership decreased the amount of time adolescent girls spent with men, decreased out-of-wedlock pregnancy by 7.5 percentage points and increased school attendance by 8.5 percentage points. In a follow-up study, the positive effects persisted in higher human capital accumulation (increased school enrolment at higher levels of education) over time for group members (Bandiera et al., 2020).

5. Discussion

Several common themes emerged in our evidence synthesis of the relationship between women’s groups and acute covariate shocks. First, covariate shocks tend to disrupt group activities – either through reducing membership and meetings or by altering group functions to respond to the shock. Widespread shocks also tend to deplete group resources in a time of high need. However, linkages to formal institutions can mitigate the impact of shocks on group resources by extending access to credit beyond the shock-affected resource pool. Studies conducted in India with networked and institutionally linked SHGs were more likely to report positive resilience outcomes due to uninterrupted access to credit, while studies of more autonomous women’s groups tended to describe resource shortages and reliance on savings. Policy makers could create ways for groups to adapt to the crisis by introducing more flexibility during a crisis, for example by allowing members to be more flexible in their contributions and loan repayments during a large covariate shock, such as COVID-19. However, there may be a tension between the prioritization of group resilience versus individual resilience that is

underexplored in the literature. We also did not find evidence on how women's group adaptations (such as switching to digital technology when in-person meetings are disrupted) may contribute to or shape group resilience during shocks.

The evidence of women's groups providing resilience to members is limited in quantity and scope but rich in content. Published studies prioritize economic SHGs experiencing weather shocks, but a few articles examine the social support mechanisms of groups amidst the psychological toll of conflict shocks. Results vary according to shock severity, group purpose and structure, and outcome measures, but the evidence is largely supportive of the ability of women's groups to benefit members during covariate shocks. While evidence on specific mechanisms is limited, the literature suggests that accumulated and regular savings and flexible credit conditions may contribute to the ability of groups to mitigate the negative economic consequences of shocks for individuals, though with potentially differential consequences across members. However, the lack of subgroup analyses, such as differential impacts on members according to income or caste, is a prominent gap in the current literature.

The literature cites numerous benefits of women's group involvement in the community response to a shock, but also suggests that women's groups and advocacy organizations often feel sidelined. Women's groups can provide valuable local expertise, human infrastructure, and community connections, with the potential to support governments and a variety of private actors in stronger, more sustainable responses to covariate shocks in contexts with wide coverage. Future research could expand upon this point and explore to what extent this engagement places a greater relative burden or risk on women versus to what extent it helps empower them and contribute to shifting gender norms in their communities.

6. Conclusions

This review showed evidence that while women's groups may provide resilience to members and communities, covariate shocks tend to disrupt group activities and reduce group resources. The findings thus suggest a trade-off between individual or household and group resilience, indicating that groups may require additional financial support to remain sustainable during and in the aftermath of crises. This is consistent with the finding that access to formal institutions can mitigate the negative impacts of shocks on group resilience. We found similar results in the context of the Ebola crisis during which group members had limited opportunities to contribute

savings, which put pressure on the group's social fund (Androsik, 2020). However, evidence from Liberia also shows that group members continued contributing to their group throughout the crisis.

These findings are consistent with early findings related to the short-term effects of COVID-19 on women's groups and their members. Evidence from nationally representative longitudinal panel data based on in-person (before COVID-19) and phone-based (after COVID-19) surveys in Nigeria showed that households with a female member in a savings group saw smaller increases in food insecurity than households without members (Namisango et al., 2021). A study from Uganda also suggests membership in savings groups was associated with a lower likelihood of suffering income shocks and a lower likelihood of a reduction in food consumption (Kansiime et al., 2020). A study from India found mixed results suggesting smaller decreases in consumption after COVID-19 for SHG members compared to non-members, but no evidence for statistically significant associations with other economic outcomes (de Hoop et al., 2021). In addition, the large majority of women's group farmers in Kerala, India, was able to get a fair return because they had access to enough intra-group labor to continue harvesting during COVID-19 (Agarwal, 2021). Findings from India further indicate that SHGs faced challenges due to COVID-19 lockdowns, particularly lower mobilization of monthly savings, which may create challenges for group sustainability. The same study showed that SHGs in geographies that received disbursements from the government experienced lower reductions in savings than SHGs in geographies without disbursement, which may have supported resilience of groups (Siwach et al., 2021). VSLAs in various countries in sub-Saharan Africa also adapted their programming by introducing digital meetings, changing meeting frequency, and meeting with fewer members at a time after the gradual relaxation of the lockdown (Namisango et al., 2021). Similar to women's groups in Liberia during the 2014 Ebola outbreak, women SHG members in India and savings group members in various countries in sub-Saharan Africa also became involved in the community response by partnering with government agencies to produce personal protective equipment (PPE), hand sanitizer, and masks and support vulnerable community members (Government of India, 2020; Namisango et al., 2021).

While evidence is emerging about the initial implications of COVID-19 for women's groups, the long-term impacts of COVID-19 on women's groups and their members remain unknown. Future research can contribute to addressing this evidence-gap through mixed-methods research on how women's group membership may contribute to long-term resilience of

members, and by assessing the longer-term effects of covariate shocks on group sustainability (with or without financial assistance to groups).

In the short term, we nonetheless have several take-aways from the evidence synthesis that may inform policy:

- **Sustainable access to financial and other resources, for both women's groups and their members, is a crucial resilience mechanism to support women's groups and their members during and in the aftermath of covariate shocks, such as COVID-19.** Uninterrupted access to credit with flexible conditions is important for member resilience, and support for women's groups may include external contributions to group resources, such as cash transfers, to help members smooth consumption while normal income generating activities are suspended (IWWAGE, 2020). For example, the Reserve Bank of India provided an option for one-time restructuring to borrowers in August 2020 in response to the pandemic. This option included SHG loans for which the account was classified as 'standard' as of March 1, 2020, and where defaults were not over 30 days. However, reports suggest that by the deadline of 31 December 2020, banks had received restructuring requests for only 2% of the loan book (de Hoop et al., 2021). Policy seeking to bolster resilience will likely also require a multidimensional approach beyond meeting basic needs and providing financial support, to include other supports such as psychosocial support, access to health information, and protections against the increased risks of gender-based and domestic violence. (IWWAGE 2020)
- **Meaningful partnerships with women's groups during a community response to a shock have great potential.** Research suggests that including women groups in a meaningful way can produce benefits for the community as a whole and, especially where groups exist on a wide scale, for women's overall resilience to shocks. Qualitative findings from Nigeria indicate that women's groups may have helped to provide support to members in acute need, connecting women with new income opportunities and helping to reduce gender-based violence (Agene & Onyishi, 2020). However, evidence from India also shows that women producing masks in response to COVID-19 suffered due to delayed payments for goods procured on credit (Kudumbashree State Mission, 2020), indicating that partnerships with women's groups during crisis must also ensure risk mitigation and protection for women (CARE, 2020b), for example by ensuring timely

payment. It also remains critical to ensure social distancing and access to personal protective equipment for women leaders and contributors in the response to COVID-19.

- **Policies and adaptations of interventions can have heightened potential for unintended adverse consequences during shocks.** Policymakers concerned with equity will need to consider – and monitor – the possibility that the benefits of women's groups may not be distributed equally among members, and that the most vulnerable may be excluded from or harmed from groups during shocks. For example, the use of digital meetings has created barriers to participation for some of the most marginalized women (Namisango et al., 2021). Care will also be necessary to ensure that interventions targeted toward women's groups during shocks is carried out in an empowering way rather than increasing existing gendered burdens or perpetuating gender inequities.

The included studies provide a broad and comprehensive overview of the relationships between women's groups and covariate shocks. However, as this review was rapid and not fully systematic we want to acknowledge several limitations. Though we conducted extensive searches of various platforms, it is likely that we missed some of the evidence. Additionally, the research design and methodological rigor of the reviewed studies varied widely, and we did not conduct a risk of bias assessment on the included studies (Hombrados & Waddington, 2012). Due to the scope, findings for one women's group may have limited generalizability to other women's groups across contexts or population groups (i.e. adolescents and adult women). In addition, detailed information about each women's group (including gender composition) was often inconsistently specified. Finally, comparisons and effect aggregation across studies are challenging due to diverse outcome measurement, shock severity, and group type.

Despite these limitations, reviewing the recent historical record on women's groups and shocks was important to synthesize lessons learned and enable the generation of a broad evidence base on this topic. The review provides meaningful evidence for policy makers and practitioners engaged with women's groups who aim to strengthen their long-term resilience after COVID-19. It also points to the importance going forward of studying and documenting the effect on, and response of, women's groups to serious but possibly more localized shocks that have not garnered the research attention of COVID. When and where these shocks will occur is unpredictable, making rigorous study designs difficult. But it is

certain covariate shocks will continue to happen, and most likely disproportionately affect women in some of the world's most vulnerable populations. Better understanding women's groups in this context may support pre-emptive policy and group action and hasten post-shock responses. It can also help expand our understanding of how, and under what conditions, joining a group can support individual resilience and contribute to community responses.

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Annex A: Coding Spreadsheet

Table A-1. Coding Spreadsheet

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Ahmed, D. (1999). Vegetable growers of BRAC and flood 1998: A case study of a village organization in Gaibandha district (pp. 77–83). In S. M. Ahmed & H. S. Ahmed (Eds.), <i>Experiences of deluge: Flood 1998</i> (Research Monograph Series No. 15). Research and Evaluation Division, BRAC.	Organization report	Qualitative	South Asia	Bangladesh	Microfinance group	Natural: Bangladesh flood, 1998	Y	N	Food security; income	N/A	The shock had a negative impact on the economic activities of BRAC village organization (VO) members. They were not spared by the flood as it persisted for more than 2 months, wreaking havoc on all kinds of crops. Due to lack of work, some group members disposed of their savings for family maintenance. Members also invested their savings into new businesses (e.g., rice and cloth business; growers mortgaged-out their lands and/or borrowed from noninstitutional

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											sources as they needed money for starting small business). Members reported reduced food consumption to some extent but they tremendously reduced buying non-food item such as soap, hair oil, etc. Paddy stored for household consumption was also sold to cope with the situation.
Alam, K., & Rahman, M. H. (2017). The role of women in disaster resilience (pp. 697–719). In C. N. Madu & C.-H. Kuei (Eds.), <i>Handbook of disaster risk reduction and management</i> . World Scientific Press.	Book chapter	Review	Multiple	India, Jamaica, Japan, Nicaragua, Mexico	Unspecified	Natural: various	N	N	N/A	N/A	Women's groups participated in post-disaster recovery. The article states that "women's participation in rescue, planning, relief and rehabilitation is limited," but that "post-disaster recovery stor[ies] in India, Jamaica, Japan, Nicaragua, and Mexico [tell] us that women were active in rebuilding their communities by utilizing pre-existing strong

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											organizations. Women's groups were found able to respond quickly, mobilize community resources efficiently, and reduce the amount of damage when disasters struck" (p. 15).
Anandan, S. (2018, August 29). Kerala floods: Kudumbashree women play big role in clean-up. <i>The Hindu</i> . https://www.thehindu.com/news/national/kerala/kudumbashree-collects-5-cr-for-flood-relief/article24801984.ece	Newspaper article	Qualitative	South Asia	India	Self-help group (SHG)	Natural: Kerala floods, 2018	N	N	N/A	N/A	Participation by women's SHGs in household cleaning drives, contributions to a relief fund, counseling services for psychological support, and making packaged meals for the affected was immense.
Androsik, A. (2020). Gendered understanding of Ebola crisis in Sierra Leone.	Peer-reviewed journal article	Mixed methods	Sub-Saharan Africa	Sierra Leone	Other savings group	Health: Ebola	Y	N	N/A	N/A	The increased burden of the shock on saving's group members decreased their propensity to save and put pressure on the

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Lessons for COVID-19. <i>Population and Economics</i> , 4(2), 88–95. https://doi.org/10.3897/popecon.4.e53301											social fund. Members "indicated that their joint money, i.e. social fund, has been used for burial services of (family) members, and to support vulnerable children whose parents died during the Ebola outbreak" (p. 93).
Ashraf, N., Giné, X., & Karlan, D. (2009). Finding missing markets (and a disturbing epilogue): Evidence from an export crop adoption and marketing intervention in Kenya. <i>American Journal of Agricultural Economics</i> , 91(4), 973–990. https://doi.org/10.1111/j.1467-8276.2009.01319.x	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	Kenya	SHG	Economic: Change in export policy	N	N	N/A	N/A	When SHGs had donors to cover the cost of meeting the new standards, farmers could continue to export. When they did not, the farmers had to change crops or figure out how to fund it themselves.

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Atela, J., Gannon, K. E. and Crick, F. (2018). Climate change adaptation among female-led micro, small and medium enterprises in semi-arid areas: A case study from Kenya (pp. 1–18). In W. Leal Filho (Ed.), <i>Handbook of climate change resilience</i> . Springer. https://doi.org/10.1007/978-3-319-71025-9_97-1 .	Book chapter	Qualitative	Sub-Saharan Africa	Kenya	Other savings group	Natural: Climate shocks	Y	N	N/A	N/A	Participants stated that women's groups were an important resource during the shock, but also that the covariate climate shock was likely to deplete women's group resources. "Participants also highlighted the importance of formal and informal support networks, such as women's groups, in supporting female entrepreneurs in the face of the multiple and concurrent social and economic challenges they experience... Participants suggested these networks were an important means of accessing cash for business and household needs. However, most participants felt that money from table banking was not adequate to protect businesses from the

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
											impacts of climate extremes, not least because, given the temporally bound nature of climate shocks, resources may be required by businesses concurrently" (p. 11).
Bahadur, A., Lovell, E., & Pichon, F. (2016). <i>Effectiveness in building resilience: Synthesis report for Oxfam's resilience outcome area</i> (Oxfam Research Reports.) Overseas Development Institute. https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620103/effectiveness-resilience-building-080216-	Organization report	Review	Sub-Saharan Africa	Senegal	Other savings group	Natural: Climate and weather shocks	Y	Y	Use of savings in the face of rising food insecurity	Mixed	N/A

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
en.pdf?sequence=1&isAllowed=y											
Bandiera, O., Buehren, N., Goldstein, M. P., Rasul, I., & Smurra, A. (2019). <i>The economic lives of young women in the time of Ebola: Lessons from an empowerment program</i> (Policy Research Working Paper No. 8760) The World Bank. https://www.povertyactionlab.org/sites/default/files/research-paper/The-Economic-Lives-of-Young-Women_ELA_SL_Bandiera-et-al_Dec2018.pdf	Working paper	Quantitative	Sub-Saharan Africa	Sierra Leone	Empowerment and Livelihoods for Adolescents (ELA) and other groups for adolescent girls	Health: Ebola	Y	Y	School attendance post-crisis; Preventing out-of-wedlock pregnancy	Supportive	BRAC suspended group microfinance activities.

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Bandiera, O., Buehren, N., Goldstein, M., Rasul, I., & Smurra, A. (2020). <i>Do school closures during an epidemic have persistent effects? Evidence from Sierra Leone in the time of Ebola</i> [Working paper]. Poverty Action Lab. https://www.povertyactionlab.org/sites/default/files/research-paper/working-paper_720_School-Closures-During-Epidemic_Sierra-Leone_July2020.pdf	Working paper	Quantitative	Sub-Saharan Africa	Sierra Leone	ELA and other groups for adolescent girls	Health: Ebola	Y	Y	School enrollment post-epidemic school closures; Pregnancies	Supportive	The ELA groups in Sierra Leone happened to come into existence at the same time as the ongoing Ebola virus disease (EVD) outbreak. Monitoring data confirms that there was an extensive rollout of the ELA program despite the circumstances: 70% of clubs opened on time (by September 2014). There was also high demand to participate: 71% of survey respondents in treated villages participated in an ELA club meeting or activity at one time (versus 4% in control villages).
BARA & IPA. (2013). <i>Final impact evaluation of the saving for change program in Mali</i> ,	Organization report	Mixed methods	Sub-Saharan Africa	Mali	Other savings group	Multiple: Lean season, drought, livestock	Y	Y	Food consumption	Supportive	A confluence of disasters during the study period (drought, floods, poor harvests, political conflict/violence, livestock

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2009–2012. https://www.freedomfromhunger.org/sites/default/files/SavingforChangeMaliResearchFullReportMay2013.pdf						disease, conflict					disease outbreaks) constrained group outcomes. Some groups met less, saved less, undertook fewer entrepreneurial activities, or disbanded altogether. As an adaptation strategy, some groups timed share-outs for the lean season.
Bass, J., Murray, S., Cole, G., Bolton, P., Poulton, C., Robinette, K., Seban, J., Falb, K., & Annan, J. (2016). Economic, social and mental health impacts of an economic intervention for female sexual violence survivors in Eastern Democratic Republic of Congo. <i>Global Mental</i>	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	DRC	Village savings and loan associations (VSLAs)	Conflict: Persistent conflict and mass sexual violence	Y	Y	Food expenditure per capita; Internalized stigma	Supportive: Food expenditure per capita; internalized stigma Not supportive: Mental health	N/A

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Health, 3, e19. https://doi.org/10.1017/gmh.2016.13											
Benni, N., & Barkataky, R. (2018). <i>The role of the Self Employed Women's Association (SEWA) in providing financial services to rural women</i> . Food and Agriculture Organization of the United Nations. http://www.fao.org/3/CA2707EN/ca2707en.pdf	Organization report	Qualitative	South Asia	India	SHG	Natural: Earthquake	N	N	N/A	N/A	The Self Employed Women's Association (SEWA) strengthened its post-disaster livelihood financing approach through the creation of a Livelihood Security Fund, whose purpose is to finance livelihood resilience in disaster-prone areas where SEWA members reside, mainly by promoting economic empowerment programs tailored to the specific needs and strengths of each rural community. SEWA contributed to the disaster response by providing a blend of microfinance products, along with capacity building focused on financial management and regular savings, which

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											could not only assist households and individuals in the post-disaster recuperation process, but also strengthen their ex-ante mitigation strategies in view of future catastrophic events. They also provided microenterprise development services to poor rural households in order to expand their income base and diversify their income sources away from purely agricultural activities. Overall, the recovery project contributed to the economic rehabilitation of 40,000 rural households during its 7 years of implementation.
Bermudez, L., & Matuszeski, J. (2010). <i>Ensuring continued success: Saving for change</i>	Organization report	Qualitative	Sub-Saharan Africa	Mali	Other savings group	Natural: Rainfall shock	N	N	N/A	N/A	Group members sometimes take out individual agricultural loans right before the rainy season because group

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<i>in older program areas of Mali.</i> Oxfam America. https://s3.amazonaws.com/oxfam-us/www/static/media/files/Ensuring_Continued_Success_-_Saving_for_Change_in_Older_Program_Areas_in_Mali.pdf											resources are not sufficient for this covariate seasonal shock. "Although the majority of...groups already provide agricultural loans (with three to six month durations), it is possible that the size of the group fund limits the number of agricultural loans and the size of the loans that can be given out at any one time" (p. X).
Berry, M. E. (2015). From violence to mobilization: Women, war, and threat in Rwanda. <i>Mobilization: An International Quarterly</i> , 20(2), 135–156. https://doi.org/10.17813/1086-671x-20-2-135	Peer-reviewed journal article	Qualitative	Sub-Saharan Africa	Rwanda	SHG	Conflict: Genocide	Y	N	N/A	N/A	A women's group formed in response to the shock as women felt they needed to grieve together.

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Branco, A. de Melo. (2009). Women responding to drought in Brazil (pp. 261–272). In E. Enarson & P. G. Dhar Chakrabarti (Eds.), <i>Women, gender and disaster: Global issues and initiatives</i> . SAGE Publications India Pvt Ltd. https://doi.org/10.4135/9788132108078.n20	Book chapter	Qualitative	Latin America and Caribbean	Brazil	Collective action and grassroots group	Natural: Drought	Y	N	N/A	N/A	N/A
Brickman Raredon, A. (2011). <i>Opportunity in Haiti: Women as agents of resilience in post-disaster reconstruction</i> [Master's thesis, Massachusetts Institute of	Thesis	Mixed methods	Latin America and Caribbean	Haiti	Multiple	Natural: Earthquake	N	N	N/A	N/A	The groups partnered with camps, a local human rights law firm, the United Nations Development Fund for Women (UNIFEM), and other women's organizations to provide support, services, and advocacy for women and girls after the earthquake,

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Technology]. DSpace@MIT. https://dspace.mit.edu/handle/1721.1/67222											especially around incidences of rape and violence.
Brownhill, L. (2009). A climate for change: Humanitarian disaster and the movement for the commons in Kenya (pp. 224–232). In E. Enarson & P. G. Dhar Chakrabarti (Eds.), <i>Women, gender and disaster: Global issues and initiatives</i> . SAGE Publications India Pvt Ltd. https://doi.org/10.4135/9788132108078.n17	Book chapter	Qualitative	Sub-Saharan Africa	Kenya	Multiple	Conflict: Social unrest	N	N	N/A	N/A	Discusses how more traditional women's groups (such as savings groups) became part of the Green Belt Movement that "engaged hundreds of thousands of rural Kenyan women in expanding and defending their rights to control and protect land" (p. 3). This movement, in turn, got integrated into larger political movements such as the Freedom Corner hunger strike, considered to be "an historical turning point for the democracy movement in Kenya" (p. 4).

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Brunie, A., Fumagalli, L., Martin, T., Field, S., & Rutherford, D. (2014). Can village savings and loan groups be a potential tool in the malnutrition fight? Mixed method findings from Mozambique. <i>Children and Youth Services Review</i> , 47 (Pt. 2), 113–120. https://doi.org/10.1016/j.childyouth.2014.07.010	Peer-reviewed journal article	Mixed methods	Sub-Saharan Africa	Mozambique	Multiple	Natural: Hunger season	N	N	N/A	N/A	In response to the hunger shock, a policy whereby VSLAs distribute group savings right before the hunger season is theorized to be the reason for increased food security during the hunger season.
Buehren, N., Chakravarty, S., Goldstein, M., Slavchevska, V., & Sulaiman, M. (2017). <i>Adolescent girls' empowerment in conflict-affected settings</i> :	Conference paper	Quantitative	Sub-Saharan Africa	South Sudan	ELA and other groups for adolescent girls	Conflict: Ethnic conflict	Y	Y	Income-generating activities (employment outcomes); School enrollment	Not supportive: IGAs Supportive: School enrollment	N/A

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Experimental evidence from South Sudan [Conference paper]. Centre for the Study of African Economies (CSAE) Conference 2017, St. Catherine's College, Oxford, United Kingdom. https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CSAE2018&paper_id=1112											
Camara, S., Delamou, A., Millimouno, T. M., Kourouma, K., Ndiaye, B., & Thiam, S. (2020). Community response to the Ebola outbreak: Contribution of	Peer-reviewed journal article	Mixed methods	Sub-Saharan Africa	Guinea	Unspecified	Health: Ebola	N	N	N/A	N/A	Prior responses were not culturally relevant or responsive, leading to mistrust (and even violence), and, resultantly, higher Ebola transmission. This paper argues that community involvement and engagement—including by partnering with

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community-based organisations and community leaders in four health districts in Guinea. <i>Global Public Health</i> , 15(12), 1767–1777. https://doi.org/10.1080/17441692.2020.1789194											community based organizations, women's groups, and community leaders—in the planning and implementation of the Ebola response interventions strengthened their response, eliminating community reluctance, improving contact tracing and secure burials, and increasing the use of health services.
CARE. (2015). <i>The resilience champions: When women contribute to the resilience of communities in the Sahel through savings and community-based adaptation</i> . https://reliefweb.int/report/niger/resilience-champions-when-women-contribute-	Organizational report	Qualitative	Sub-Saharan Africa	Niger, Mali	VSLA	Multiple, various	N	N	N/A	N/A	“In some cases, because of the intensity of the crisis, some VSLA groups might refuse to integrate new members or to share their benefits (ex. grain banks). As VSLA groups become more inward-looking, the impacts are fewer on the whole community. However, the majority of groups support non-members with credits or grains purchases.

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resilience-communities-sahel-through-savings											Solidarity leads to the creation of new groups, until there remain only a few dozen non-VSLA households left" (p. 16). "VSLA groups, particularly when they operate in network, play a key role in supporting vulnerable groups, such as displaced families, until food supplies are distributed" (p. 15). "As VSLA groups grow and mature, the assistance provided to vulnerable families is increased and the community becomes more resilient" (p. 16).
CARE. (2020). <i>Learning brief: VSLA and CARE adaptations to COVID-19 and past crises.</i> https://www.care.org/wp-content/uploads/20	Organizational report	Review	Sub-Saharan Africa	Benin, Burundi, Democratic Republic of the Congo (DRC), Mozambique, Niger, Nigeria,	VSLA	Health: COVID-19, Ebola, HIV	N	N	N/A	N/A	To adapt to health crises, groups accelerated cash share outs to members, created health funds, and changed how, when, and if they met to ensure social distancing and hygiene practices were applied. They also partnered with

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20/05/care_covid-19_vsla_program_examples_final_external.pdf				Rwanda, Tanzania, Uganda, Haiti, Chad, Mali, Sierra Leone, Somalia, Bangladesh, Ethiopia							government and nonprofit organizations to support the community response. During the COVID-19 shock, VSLAs spread awareness in their communities and provided personal protective equipment (PPE) resources. During other shocks, they also participated in food aid distribution. Groups used text messages, WhatsApp, radio, Interactive Voice Response (IVR) and other technologies to amplify health messages from the World Health Organization (WHO) and local and national governments as well as messaging specifically related to mitigating gender-based violence and supporting survivors.

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Christian, P., Kandpal, E., Palaniswamy, N., & Rao, V. (2019). Safety nets and natural disaster mitigation: Evidence from cyclone Phailin in Odisha. <i>Climatic Change</i> , 153(1–2), 141–164. https://doi.org/10.1007/s10584-018-02364-8	Peer-reviewed journal article	Quantitative	South Asia	India	SHG	Natural: Flood	Y	Y	Consumption; Access to information and resources	Not supportive: Food consumption and overall expenditures Supportive: non-food consumption	Results show that governments can use SHGs to channel financial aid after extreme weather events. Post-Phailin borrowing increased to a greater degree in Odisha Rural Livelihoods Project (group) areas than non-TRIPTI areas.
Clissold, R., Westoby, R., & McNamara, K. E. (2020). Women as recovery enablers in the face of disasters in Vanuatu. <i>Geoforum</i> , 113, 101–110. https://doi.org/10.1016/j.geoforum.2020.04.011	Peer-reviewed journal article	Qualitative	East Asia and Pacific	Vanuatu	Multiple	Natural: Cyclone	Y	N	N/A	N/A	Women collectivized (through formal associations and networks) to advocate for better response and recovery in the face of inadequacies in government response.

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16/j.geoforum.2020.05.003											
Coppock, D. L., & Desta, S. (2013). Collective action, innovation, and wealth generation among settled pastoral women in northern Kenya. <i>Rangeland Ecology & Management</i> , 66(1), 95–105. https://doi.org/10.2111/REM-D-11-00211.1	Peer-reviewed journal article	Mixed methods	Sub-Saharan Africa	Kenya	Multiple	Natural: Drought	Y	N	N/A	N/A	Drought was ranked as the top major challenge to sustainability and survival by group members. "Respondents exhibited a general agreement as to the determinants of group success in general. Group characteristics that promote sustainability include unity of purpose, transparency and accountability of leadership, and making good business decisions that lead to diversified microenterprises. Blends of incentives and discipline are used to instill an ethos of shared rights and responsibilities among group members. Participation in savings and credit activity is a valuable means to instill values

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											consistent with successful collective action. The ability of a group to secure external support from GO and NGO partners was also important for sustainability."
Corbin, J. N., & Hall, J. C. (2019). Resettlement post conflict: Risk and protective factors and resilience among women in northern Uganda. <i>International Social Work</i> , 62(2), 918–932. https://doi.org/10.1177/0020872818755863	Peer-reviewed journal article	Qualitative	Sub-Saharan Africa	Uganda	VSLA	Conflict: Violence; displacement	Y	N	N/A	N/A	Displacement and lack of men (either because of death or loss of idleness) resulted in some land disputes for women. Groups seemed to form as an adaptation to this. Women started farming land together and saving together.
Darychuk, A., & Jackson, S. (2015). Understanding community resilience through	Peer-reviewed journal article	Qualitative	Middle East/North Africa (MENA)	Palestine	Other	Conflict: Violence; displacement	Y	N	N/A	N/A	N/A

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the accounts of women living in west bank refugee camps. <i>Affilia</i> , 30(4), 447–460. https://doi.org/10.1177/0886109915572845											
De, S. (2011). <i>The whims of Indian monsoons: Long-term health consequences of early childhood exposure to the Indian drought of 2002</i> (Master's thesis, University of Oxford). Young Lives. https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-SP-De_MPhilDissertation-2011.pdf	Thesis	Quantitative	South Asia	India	SHG	Natural: Drought	Y	Y	WHO anthropometric z-scores of height-for-age for children (intended to measure ability to cope with shock)	Not supportive	N/A

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Deepa, T. M., Rao, E. V., Patil, R. R., & Samuel, R. (2008). Operational feasibility of establishing community reporting systems. <i>National Medical Journal of India</i> , 21(4), 166–170.	Peer-reviewed journal article	Mixed methods	South Asia	India	SHG	Health: Infectious diseases	N	N	N/A	N/A	SHGs partnered with the Ministry of Health, United Nations Development Programme (UNDP), and the government of India to report instances of diseases and other vital health events for outbreak surveillance.
Demont, T. (2013). <i>Poverty, access to credit and absorption of weather shocks: Evidence from Indian self-help groups</i> (CRED working paper). http://www.ecineq.org/ecineq_bari13/FI LESxBari13/CR2/p198.pdf	Working paper	Quantitative	South Asia	India	SHG	Natural: Rainfall shock	Y	Y	Consumption smoothing; Income smoothing	Supportive (indirectly, through access to credit and agricultural diversification)	The shock did not have a huge impact on group resources. SHGs “do not stop working in case of largely covariate weather shocks, thanks to their collection of regular deposits, strong repayment performance, and linkages with external commercial banks for additional funding.” This paper suggests that mandated savings requirements were

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											not relaxed during the shock.
Demont, T. (2020). <i>Coping with shocks: The impact of Self-Help Groups on migration and food security</i> (ASME Working Paper 2016). Aix-Marseille School of Economics.	Working paper	Quantitative	South Asia	India	SHG	Natural: Rainfall shock	Y	Y	Agriculture and food security; Credit; Labor supply and seasonal migration	Supportive	Discusses how Indian SHGs have a policy of forced savings, which is "central to their resilience" (p. 41).
Dumas, T. (2016). <i>Mitigating the impact of the Ebola virus disease on the most vulnerable households through an integrated food and nutrition security intervention in the district of Moyamba, Sierra Leone</i> . ACF International. https://www.alnap.org	Organization report	Qualitative	Sub-Saharan Africa	Sierra Leone	VSLA	Health: Ebola	N	N	N/A	N/A	N/A

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rg/help-library/mitigating-the-impact-of-the-ebola-virus-disease-on-the-most-vulnerable-households											
Enarson, E. (2001). <i>We want work: Rural women in the Gujarat drought and earthquake</i> (Natural Hazards Center Quick Response Report #135). https://www.academia.edu/download/25736221/We_want_work--Gujarat_quake.pdf	Working paper	Qualitative	South Asia	India	Other savings group	Natural: Earthquake, drought	N	N	N/A	N/A	"Savings groups were present in 25 villages but women's access to the small loans they offer declined following the quake in 8 villages; in only 2 villages were they disrupted by the drought" (p. 15).
Enarson, E., Fothergill, A., & Peek, L. (2007). <i>Gender and disaster: Foundations and</i>	Book chapter	Review	Multiple	Multiple	Collective action and grassroots group	Natural: Disaster	N	N	N/A	N/A	Groups are involved in relief services and recovery efforts: "for example, women's groups are often actively involved in the crisis period, delivering

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directions (pp. 130–146). In H. Rodríguez, E. L. Quarantelli, & R. R. Dynes (Eds.), <i>Handbook of disaster research</i> . Springer. https://doi.org/10.1007/978-0-387-32353-4_8											food and other supplies. Occasionally these are newly formed groups, but more often they are preexisting women's community groups that expand their work to disaster relief operations....Overall, however, despite women's considerable work in relief and recovery, most research finds that women are not in positions of authority" (p. 137).
Falk, M. L. (2014) Gender and Buddhism in the wake of the tsunami (pp. 381–392). In: P. Liamputtong (Ed.), <i>Contemporary socio-cultural and political perspectives in Thailand</i> . Springer,	Book chapter	Qualitative	East Asia and Pacific	Thailand	SHG	Natural: Tsunami	Y	N	N/A	N/A	N/A

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Dordrecht. https://doi.org/10.1007/978-94-007-7244-1_24											
Féron, É. (2020). Reinventing conflict prevention? Women and the prevention of the reemergence of conflict in Burundi. <i>Conflict Resolution Quarterly</i> , 37(3), 239–252). https://doi.org/10.1002/crq.21275	Peer-reviewed journal article	Qualitative	Sub-Saharan Africa	Burundi	Unspecified	Conflict: Political unrest, violence, displacement	N	N	N/A	N/A	“Over the past few years, Burundian women's organizations have...been setting up and running early warning systems that relay information about conflicts emerging in the provinces towards the national level. They have also been involved in the mediation of local conflicts, including when these had strong political and military undertones. Other local programs include microcredit projects to help the poorest households, capacity-building programs, educational support, training in the prevention, resolution, and mediation of conflicts, as well as school-based

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											<p>drama groups where youth are encouraged to tell their stories and share their resentment or sorrow." However, ongoing conflict has not been without some negative impact to the groups themselves. For example: "Many female politicians and civil society activists who were active until 2015 have taken the road of exile. Some of those who have fled had accumulated crucial political experience and skills during the past decades, for instance by participating in conflict prevention and mediation activities at the highest levels, and/or by holding high-level political positions. Their absence weighs heavily on some women's groups."</p>

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Fisher, S. (2009). Sri Lankan women's organisations responding to post-tsunami violence (pp. 233–249). In E. Enarson & P. G. Dhar Chakrabarti (Eds.), <i>Women, gender and disaster: Global issues and initiatives</i> . SAGE Publications India Pvt Ltd. https://doi.org/10.4135/9788132108078.n18	Book chapter	Qualitative	South Asia	Sri Lanka	Unspecified	Natural: Tsunami	N	N	N/A	N/A	Women's groups worked to address post-tsunami violence. They supported and advocated for a wide variety of different gender-based violence prevention activities including advocating for more gender-friendly shelters, reporting gender-based violence, raising awareness, and offering victim support services and trainings among other things.
Fordham, M., Gupta, S., Akerkar, S., & Scharf, M. (2011). <i>Leading resilient development: Grassroots women's priorities</i> ,	Organizational report	Qualitative	Multiple	Honduras, India, Philippines, Turkey, Sri Lanka	Multiple	Natural: Various (hurricane, tsunami, floods, earthquake)	N	N	N/A	N/A	This publication describes multiple case studies of women's groups forming post-disaster to support relief, reconstruction, and recovery as well as disaster preparation to reduce community

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<i>practices and innovations</i> . United Nations Development Programme (UNDP). http://lib.riskreductionafrica.org/bitstream/handle/123456789/542/Leading%20Resilient%20Development.%20Grassroots%20Women's%20Priorities,%20Practices%20and%20Innovations.pdf?sequence=1											vulnerability to future shocks. Many of these grassroots women's efforts evolved into long-term, established organizations around resilience.
Garikipati, S. (2008). The impact of lending to women on household vulnerability and women's empowerment: <i>Evidence from India</i> . <i>World Development</i> ,	Peer-reviewed journal article	Quantitative	South Asia	India	SHG	Natural: Drought	Y	Y	A point system comprised of a household's ability to cope with a drought (met food and health	Supportive	N/A

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36(12), 2620–2642. https://doi.org/10.1016/j.worlddev.2007.11.008									needs, did not have to sell livestock or other assets, did not need to migrate, expected to cope similarly in a future drought, and did not postpone income-enhancing plans)		
Gash, M., & Gray, B. (2016). <i>The role of financial services in building household resilience in Burkina Faso</i> [Working paper]. CGAP. https://mangotree.org	Working paper	Qualitative	Sub-Saharan Africa	Burkina Faso	Other savings group	Economic : Harvest-related economic shocks	Y	N	NA	N/A	The savings groups in this working paper did not have the resources to mitigate covariate shocks for group members.

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
g/files/galleries/1698_The_Role_of_Financial_Services_in_Building_Household_Resilience_in_Burkina_Faso.pdf											
Ghosh, S. (2019, November 12)). After cyclone Fani, women in a migrant fishing community start resilience fund. Mongabay Series: Environment and Her. <i>Mongabay</i> . https://india.mongabay.com/2019/11/after-cyclone-fani-women-in-a-migrant-fishing-community-start-resilience-fund/	Blog	Qualitative	South Asia	India	SHG	Natural: Cyclone Fani	N	N	N/A	N/A	A resilience fund and SHG formed post-shock as a way to cope. Group savings were deposited in a bank.
Government of Odisha, United Nations, World Bank, Asian	Organization report	Qualitative	South Asia	India	Multiple	Natural: Cyclone Fani	N	N	N/A	N/A	Cyclone Fani's onslaught left 1,09,815 SHG members facing the loss of the land-based assets they

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Development Bank. (2019). <i>Cyclone Fani: Damage, loss and needs assessment: Odisha (India)</i> . https://www.ilo.org/global/topics/employment-promotion/recovery-and-reconstruction/WCMS_732468/lang-en/index.htm											had created for agriculture and allied activities. Kitchens in schools were converted into community kitchens and operated by SHGs. More than 6,000 free kitchens were opened to serve hot cooked meals with the help of the local panchayats and SHGs.
Gupta, S., & Leung, I. S. (2011). <i>Turning good practice into institutional mechanisms: Investing in grassroots women's leadership to scale up local implementation of the Hyogo Framework for Action: An in-depth</i>	Organizational report	Mixed methods	Multiple	Multiple	Collective action and grassroots group	Natural: General	N	N	N/A	N/A	This report provides a number of case studies of women's grassroots organizations and intuitions partnering for disaster risk reduction (DRR). However, it notes that "the successful partnerships between grassroots women's organizations and government agencies described here are exceptions rather than the

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study for the HFA Mid-Term Review. Huairou Commission and Groots International. https://www.unisdr.org/preventionweb/files/18197_201guptaandleung_the_role_of_women_as_a_safe.pdf											norm." Further, "too often, DRR and disaster recovery programs simply deliver aid or training to women in ways that reproduce rather than redress women's marginalization and vulnerabilities"—rather than partnering with grassroots women's organizations.
Hedger, M., Singha, A., & Reddy, M. (2010). <i>Building climate resilience at state level: Disaster risk management and rural livelihoods in Orissa</i> (Strengthening Climate Resilience Discussion Paper 5.) Strengthening Climate Resilience. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.5	Organizational report	Review	South Asia	India	SHG	Natural: Climate shocks	Y	N	N/A	N/A	N/A

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00.12413/2520/Builing%20climate%20resilience%20at%20state%20level.pdf?sequence=1											
Heltberg, R., Hossain, N., Reva, A., & Turk, C. (2013). Coping and resilience during the food, fuel, and financial crises. <i>Journal of Development Studies</i> , 49(5), 705–718. https://doi.org/10.1080/00220388.2012.746668	Peer-reviewed journal article	Qualitative	Multiple	Philippines, Indonesia, Senegal, Central African Republic (CAR)	Other savings group	Economic : Food, fuel, and financial crises during 2008–2011	Y	N	N/A	N/A	“In the Philippines and Indonesia, community-based savings groups helped, but in Indonesia, interviewees reported that traditional savings groups met less frequently or stopped at the height of the crisis. In West Africa, women's and professionals' tontines (rotating savings and credit groups) were often the main source of financial assistance, although the credit amounts were inadequate for new businesses. In Senegal, many poor people ended their membership in tontines due to inability to make contributions.”

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Hossain, M. Z., & Rahman, M. A. U. (2018). Pro-poor adaptation for the urban extreme poor in the context of climate change. <i>International Journal of Climate Change Strategies and Management</i> , 10(3), 389–406. https://doi.org/10.1108/IJCCSM-08-2016-0117	Peer-reviewed journal article	Qualitative	South Asia	Bangladesh	Other savings group	Natural: Bangladesh floods, 1998	N	N	N/A	N/A	In response to the shock, homeowners revealed that they obtained loans from their community saving groups to pay for repairs for damage caused by the flood.
Huang, Y., & Wong, H. (2013). Effects of social group work with survivors of the Wenchuan earthquake in a transitional community. <i>Health & Social Care in the Community</i> , 21(3), 327–337.	Peer-reviewed journal article	Qualitative	East Asia and Pacific	China	Other	Natural: Earthquake	Y	N	Subjective well-being	Supportive	Groups formed in response to the shock.

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https://doi.org/10.1111/hsc.12022											
Jahns, E. (2014). <i>Savings groups, shocks and coping strategies: The case of poor rural households in El Salvador</i> (Doctoral dissertation, Fletcher School of Law and Diplomacy, Tufts University). Tufts Digital Library. https://dl.tufts.edu/concern/pdfs/ng451v223	Dissertation	Mixed methods	Latin America and Caribbean	El Salvador	Other savings group	Economic : High food prices	Y	Y	Successful coping (no one in household experiencing hunger)	Supportive	N/A
Joshi, C., & Bhatt, M. R. (2009). Engendering tsunami recovery in Sri Lanka: The role of UNIFEM and its partners (pp. 304–319). In E. Enarson	Book chapter	Qualitative	South Asia	Sri Lanka	Unspecified	Natural: Tsunami	N	N	N/A	N/A	Women's groups were described as key local partner organizations of UNIFEM that supported advocacy and relief and recovery efforts and were key to making sure the

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& P. G. Dhar Chakrabarti (Eds.), <i>Women, gender and disaster: Global issues and initiatives</i> . SAGE Publications India Pvt Ltd. https://doi.org/10.4135/9788132108078.n23											marginalized were not excluded from efforts.
Kaboski, J. P., & Townsend, R. M. (2005). Policies and impact: An analysis of village-level microfinance institutions. <i>Journal of the European Economic Association</i> , 3(1), 1–50. https://doi.org/10.1162/1542476053295331	Peer-reviewed journal article	Quantitative	East Asia and Pacific	Thailand	Microfinance group	Economic : Various	Y	Y	Consumption smoothing	Supportive	Various group implementation features are associated with greater positive impacts regarding the resiliency of members during economic shocks. These features include offering emergency services, training services, and various savings-related policies.

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Karlan, D., Savonitto, B., Thuysbaert, B., & Udry, C. (2017). Impact of savings groups on the lives of the poor. <i>Proceedings of the National Academy of Sciences</i> , 114(12), 3079–3084. https://doi.org/10.1073/pnas.1611520114	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	Ghana, Malawi, Uganda	VSLA	Natural: Drought	Y	Y	Income; Food security	Supportive: Income; Not supportive: Food security	N/A
Kellogg, M. (2020). <i>Women building resilient cities in the context of climate change: Lessons from Freetown, Sierra Leone</i> . Georgetown Institute for Women, Peace and Security. http://giwps.georgetown.edu/wp-	Organization report	Qualitative	Sub-Saharan Africa	Sierra Leone	Other savings group	Natural: Flood	Y	N	N/A	N/A	This report discusses the role of women in community response, but not women's groups specifically.

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content/uploads/2020/06/Women-Building-Resilient-Cities.pdf											
Khatibi, F. S., Ramalingam, A., & Yamakanamardi, S. M. (2011). Role of women in prevention of epidemic waterborne diseases through training programmes in Mysore City. <i>Nature, Environment and Pollution Technology</i> , 10(2), 243–246.	Peer-reviewed journal article	Qualitative	South Asia	India	SHG	Health: Waterborne epidemics	N	N	N/A	N/A	Groups partnered with nongovernmental organizations (NGOs) to participate in community sanitation training and receive and use chlorination kits.
Kilby, P. (2008). The strength of networks: The local NGO response to the tsunami in India.	Peer-reviewed journal article	Qualitative	South Asia	India	Multiple	Natural: Tsunami	N	N	N/A	N/A	Women's groups became part of a larger network to engage in disaster response efforts. They participated in conducting a

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Disasters, 32(1), 120–130. https://doi.org/10.1111/j.1467-7717.2007.01030.x											survey to identify the worst hit villages and drew up a relief map. SHGs also participated in offering alternative livelihoods training and took out loans to support group members.
Korkoyah Jr., D. T., & Wreh, F. F. (2015). <i>Ebola impact revealed: An assessment of the differing impact of the outbreak on the women and men in Liberia</i> . Oxfam International. https://www-cdn.oxfam.org/s3fs-public/file_attachments/rr-ebola-impact-women-men-liberia-010715-en.pdf	Organizational report	Mixed methods	Sub-Saharan Africa	Liberia	Other savings group	Health: Ebola	N	N	N/A	N/A	Most groups where men and women could access loans were shut down during the Ebola crisis. Savings groups and susu clubs were some of the few places men and women could access loans. The few people (18.8%) who were able to borrow money did so primarily through informal opportunities offered by savings clubs (46.3%), friends (37.9%), family (28.2%) and susu clubs (19.8%). Due to erratic loan availability during the crisis from banks and other microfinance institutions

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											(MFIs), many community members decided to start susu clubs of their own and save small scores of money on a weekly or monthly basis to aid such future shocks.
Kruks-Wisner, G. (2011). Seeking the local state: Gender, caste, and the pursuit of public services in post-tsunami India. <i>World Development</i> , 39(7), 1143–1154. https://doi.org/10.1016/j.worlddev.2010.11.001	Peer-reviewed journal article	Qualitative	South Asia	India	SHG	Natural: Tsunami	N	N	N/A	N/A	The shock brought in more NGOs, which appears to have increased the resources of and interactions with women's groups.
Ksoll, C., Lilleør, H. B., Lønborg, J. H., & Rasmussen, O. D. (2016). Impact of village savings and loan associations:	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	Malawi	VSLA	Natural: Hunger season	Y	Y	Food security	Not supportive	N/A

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Evidence from a cluster randomized trial. <i>Journal of Development Economics</i> , 120, 70–85. https://doi.org/10.1016/j.jdeveco.2015.12.003											
Kuppuswamy, S., & Rajarathnam, S. (2009). Women, information technology and disaster management: Tsunami affected districts of Tamil Nadu. <i>International Journal of Innovation and Sustainable Development</i> , 4(2/3), 206–215. https://doi.org/10.1504/ijisd.2009.028074	Peer-reviewed journal article	Qualitative	South Asia	India	SHG	Natural: Tsunami	N	N	N/A	N/A	Women's groups formed Village Knowledge Centers (VKCs) and Village Information Centers (VICs) operated by trained women. These VKCs were owned jointly and hosted by local sanghas (local women's community groups and savings groups) in partnership with other actors (e.g., international nongovernmental organizations [INGOs], local nonprofit, banks). "The content delivered [to the community] through

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											<p>VKC is grouped under three categories:</p> <ol style="list-style-type: none"> 1. Generic content such as government employment schemes, health and health service information, local news, etc. 2. Dynamic content such as real-time market prices, examination results, and weather forecasts. 3. Timely content such as offshore wave height predictions and potential fishing zones for coastal communities."
Langlay, N. (2014). <i>The impact of Ebola virus disease on village savings and loans associations Montserrado, Margibi, Bong and Lofa counties</i> . FAO.	Organizational report	Mixed methods	Sub-Saharan Africa	Liberia	VSLA	Health: Ebola	Y	N	Well-being as a result of mutual emotional, financial, and other support	Supportive	The Ebola crisis had a "catastrophic impact" on VSLA implementation and service delivery including absenteeism, a drop in contributions, reduced access to loans, and suspension of VSLA

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http://www.fao.org/fi/leadadmin/user_upload/emergencies/docs/VSLA%20Rapid%20Assessment%20December%2019%202014.pdf											<p>activities. This, in turn, had a negative impact on VSLA member households. However, the analysis discusses group resilience as well, suggesting (indirectly) that group social cohesion contributed to VSLA resilience: "On the one hand, VSLA design and methodology have proven vulnerable to shocks. On the other hand it has however been positively transformational in furthering the social, economic, financial and political status of Liberian women." Further, "the temporary loss of income generating activities and subsequent loss of income did not break their spirit and will."</p> <p>Groups also adapted to the shock by evolving to provide psychosocial support to "to group</p>

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											members who were personally impacted by the loss of family members and to members who successfully recovered from the EVD virus." Thus, the analysis suggests that, although shock had a "catastrophic impact" on the group's resources, other functions of the group (psychosocial support) evolved to play important roles for women.
Larson, G., Drolet, J., & Samuel, M. (2013). The role of self-help groups in post-tsunami rehabilitation. <i>International Social Work</i> , 58(5), 732–742. https://doi.org/10.1177/0020872813477880	Peer-reviewed journal article	Qualitative	South Asia	India	SHG	Natural: Tsunami	Y	N	Empowerment, increased status; Economic security	Supportive: Empowerment and status Not supportive: Economic security	This article provides an analysis of the importance of SHGs for women in post-tsunami rehabilitation efforts in Tamil Nadu, India. This finding is one of eight key themes identified in a larger study of the long-term social, economic, and gender implications of post-tsunami rehabilitation work. Although SHGs were reported as having

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											provided women with new social and economic opportunities, status, and power, little evidence existed for a substantial reduction in poverty levels or a change in the prevailing patriarchal attitudes. The authors suggest that multiple long-term sustainable approaches to post-disaster reconstruction are needed to provide fundamental social and economic change for women.
Linkow, B., & Rentschler, L. (2016). Fraying of the ties that bind: Community-level financial institutions and HIV/AIDS with evidence from KwaZulu-Natal, South Africa.	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	South Africa	Other savings group	Health: HIV/AIDS during period of rapidly increasing mortality	N	N	N/A	N/A	The period of rapidly increasing risk of mortality from HIV/AIDS made people less likely to participate in informal risk sharing networks, such as accumulating savings and credit associations (ASCAs) or rotating savings and credit associations

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
<i>Journal of African Economies</i> , 25(5), 718–738. https://doi.org/10.1093/jae/ejw011											(ROSCAs) because of the high risk that someone in the group would die before contributing their share or repaying their loans.
LTS International. (2015). <i>ECRP flood study: Assessing the contribution of ECRP to flood resilience</i> . https://www.careevvaluations.org/wp-content/uploads/evaluations/final-ecrp-flood-study-report.pdf	Organization report	Mixed methods	Sub-Saharan Africa	Malawi	VSLA	Natural: Flood	Y	N	N/A	N/A	VSLAs played a role in flood recovery for members but were negatively impacted after the shock: "It is important to note, however, that the role of VSLA schemes in flood recovery was not found to be universally positive. Several focus group participants reported that since the floods VSL schemes have foundered" (p. 21).
Mehta, M. (2009). Reducing disaster risk through community resilience in the Himalayas (pp. 57–74). In E. Enarson	Book chapter	Review	South Asia	India	Unspecified	Natural: Cloudburst	N	N	N/A	N/A	Women's groups played a role in rescue, relief, and recovery post-shock: "Its adolescent empowerment programme trains girls in specialised rescue, relief and first-aid training, skills

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& P. G. Dhar Chakrabarti (Eds.), <i>Women, gender and disaster: Global issues and initiatives</i> . SAGE Publications India Pvt Ltd. https://doi.org/10.4135/9788132108078.n5											that have in the past been put into practice after cloudbursts and which helped the community to quickly move back to some semblance of normality. Women's groups have also mobilised their members to get involved: during the same cloudburst disaster, when heavy rains continued from early evening until late into the night. Almost 900 women from nearby villages were engaged in rescue and relief work helping to clear away mud, recovering bodies and providing counselling to the most affected families. One such group from a badly affected area immediately began working to reconstruct village paths, working for almost two days in order to

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											create temporary footpaths." (p. 7)
Mitchell, M. (2018, November 19). The curse of the Kosi. <i>Heifer International</i> . https://www.heifer.org/blog/the-curse-and-the-cure.html	Blog	Qualitative	South Asia	India	SHG	Natural: Floods	Y	N	Food security and life-saving strategies	Supportive	N/A
Moser, C., Norton, A., Stein, A., & Georgieva, S. (2010). <i>Pro-poor adaptation to climate change in urban centers: Case studies of vulnerability and resilience in Kenya and Nicaragua</i> . World Bank. https://openknowledge.worldbank.org/handle/10986/3001	Organization report	Qualitative	Multiple	Kenya, Nicaragua	Multiple	Natural: Rainfall shocks	N	N	N/A	N/A	Women's water management groups in Kenya played a limited role in the community response. They mobilized to protect community water assets in partnership with NGOs.

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
Mukenge, M. (2013). The role of grassroots women's groups in HIV/AIDS prevention and response: Examples of practice in post-conflict settings. <i>International Peacekeeping</i> , 20(4), 469–485. https://doi.org/10.1080/135333312.2013.849148	Peer-reviewed journal article	Qualitative	Sub-Saharan Africa	Sierra Leone, DRC	Multiple	Health: HIV	N	N	N/A	N/A	This paper describes how women's groups have formed to respond to HIV and domestic violence in conflict-ridden areas. This paper is not about how groups that were previously created for another purpose have adapted to respond to a different/new shock. Instead, many of the groups discussed in the article were formed in response to the HIV pandemic and developed their programming accordingly. This programming included public education/awareness raising, peer-educator training, counseling for psychological trauma, and vocational training. Women's groups partnered with governments, INGOs,

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											and local nonprofits to provide peer educator training and train other organizations: "Part of its outreach includes conducting peer educator training as a strategy to prevent HIV transmission among youth. Using training manuals that it developed, the group trains peer-educators and HIV-positive women on human rights, nutrition, sexual and reproductive health, coping with stigma and life skills...Indeed, the SWAA plays various leadership roles in the women's movement in Sierra Leone, including organizing consultation meetings so that women's and HIV/AIDS service organizations may collaborate effectively." Women's groups also engaged in advocacy (e.g.,

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											the paper describes how the group advocated for the passage of women's rights laws, helped translate and disseminate information on new laws)
Mukti. (2020, June 18). <i>Mukti provides aid to the SHG women group at Radhakantapur Gram Panchayat.</i> https://muktiweb.org/mukti-provides-aid-to-the-shg-women-group-at-radhakantapur-gram-panchayat	News article	Qualitative	South Asia	India	SHG	Natural: Cyclone Amphan	N	N	N/A	N/A	The shock had a negative impact on SHG members, who were deprived of their basic necessities such as shelter, jobs, food, and hope. Mukti appeared as a savior and distributed relief to the SHGs, in association with Oak Foundation and German Consulate. This relief included 5 kg of rice, 1 kg of dal, 2 kg of potato, 500 grams of oil; and provided 1 packet of sanitary napkins (to take care of women's hygiene), 3 masks (to keep them safe from COVID-19), and 1 mosquito net (preventing mosquito-borne diseases)

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											to each of the Mukti SHG members.
Mulyasari, F., & Shaw, R. (2014). Risk communication through community-based society organizations as local response to disaster in Bandung, Indonesia (pp. 231–250). In A. Neef & R. Shaw (Eds.), <i>Risks and conflicts: Local responses to natural disasters</i> (vol. 14). Emerald Group Publishing Limited.	Book chapter	Qualitative	East Asia and Pacific	Indonesia	Other	Natural: Disaster	N	N	N/A	N/A	This paper focuses on the potential for women's groups to be "risk communicators" in preparation for a disaster and during disaster response and recovery. Women's groups were typically more active before a disaster, primarily for risk communication. Benefits include a response that is better rooted in the local community and the ability to use strong networking among the women and community members. Their action can be classified into the following categories: (1) Social: "Conduct health campaigns, pass on emergency warnings, provide education and access to resources, etc."

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											<p>(2) Institutional: "Train volunteers, network, gather disaster information, etc."</p> <p>(3) Economic: "Provide small-scale insurance, inventory and household assets, link local government in rehabilitation of education sector, etc."</p>
Nambiar, M. (2016, March 7). The growing role of women in disaster risk management. <i>World Bank Blogs</i> . https://blogs.worldbank.org/endpovertyinsouthasia/growing-role-women-disaster-risk-management	Blog	Qualitative	South Asia	India	SHG	Natural: Cyclone Phailin	N	N	N/A	N/A	In Andhra Pradesh, it was found that Velugu SHGs were working closely with the government to mitigate the effects of the cyclone by making and maintaining shelters for the needy: "We charge a fee of 1000 rupees for girl's marriages and 2000 rupees for boy's marriages when conducted in the shelter. We use this money for shelter maintenance, according to K. Laxmi, secretary of the Velugu women SHG and member of the multi-

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											purpose cyclone shelter committee in East Godavari district of Andhra Pradesh. States have demonstrated effective models of community partnership and ownership around Multi-purpose Cyclone Shelters through the creation of Cyclone Shelter Management and Maintenance Committees that comprise a collaboration of both local government and the community members in running the shelters during normal times.
Nannozi, A. (2019). <i>A case study: Exploring the influence of the informal financial sector on food security among smallholder farmers in Uganda, Greater</i>	Thesis	Qualitative	Sub-Saharan Africa	Uganda	VSLA; other savings group	Economic : Price shocks	Y	N	N/A	N/A	When farmers all need loans at the same time due to seasonal needs for money, the group is better off if linked to NGO resources.

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Luweero [Master's thesis, Saint Mary's University, Halifax, Nova Scotia). Patrick Power Library. http://library2.smu.ca/xmlui/handle/01/29226											
Nayar, N., & Faisal, M. E. H. (1999). Microfinance survives Bangladesh floods. <i>Economic and Political Weekly</i> , 34(14), 801–803.	Peer-reviewed journal article	Qualitative	South Asia	Bangladesh	Microfinance group	Natural: Bangladesh floods, 1998	N	N	N/A	N/A	Microfinance providers were affected in many ways by the shock, including <ul style="list-style-type: none"> loss of income through repayment of interest; shortfalls in cash for new loans due to delayed repayments, drop in savings, and withdrawals of savings; unavailability of grant or loan capital during the crisis; client dropouts from groups;

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											<ul style="list-style-type: none"> erosion of their capital base; difficulty in paying back institutional loans (borrowings for loan fund); and problems in meeting operating expenses. <p>The Grameen Bank also implemented some adaptations and policy responses to the shocks: "During the peak period of the 1998 flood, Grameen Bank suspended repayment collection and savings mobilisation in those Grameen Bank centres that were declared 'disaster' centres. Members were permitted to withdraw up to 100 per cent from the Group Fund Savings. Grameen Bank workers ensured weekly contacts with all members to maintain morale. Bank</p>

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											workers went by boat to all members' houses in areas where centre meetings could not be held. Grameen Bank provided supplementary loans to those who were already receiving housing loans as well as new housing loans."
Pollard, A. A. (2003). Women's organizations, voluntarism, and self-financing in Solomon Islands: A participant perspective. <i>Oceania</i> , 74(1–2), 44–60. https://doi.org/10.1002/j.1834-4461.2003.tb02835.x	Peer-reviewed journal article	Qualitative	South Pacific	Solomon Islands	Multiple	Conflict: Ethnic conflict	N	N	N/A	N/A	The paper describes how some groups that were linked to government agencies have closed, or are likely to close, due to the government upheaval. Yet some groups adapted in the face of the shock by shifting their priorities or activities: "Since 1999, the political crisis has affected the RWSDP [Rural Women's Skills Development Program] as well as the overall Gender and Development Program and may result in the

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											<p>redirection of objectives and funds to tackle the direct impact of the crisis."</p> <p>Groups also partnered with the government, INGOs, local religious organizations, and militants for peacebuilding: "The WFPG is independent of any political, religious, and ethnic movements and has consistently taken a neutral stance in working towards the restoration of peace in Solomon Islands. As a neutral body, the Group's mission is to participate in the peace process in any way possible and at any time, working in collaboration with the militants and their leaders, the churches, NGOs, community leaders, chiefs, the government, and the international community....The main</p>

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											<p>purposes of the WFPG are as follows: to build confidence and trust with the militants and their leaders, with the provincial governments of Malaita and Guadalcanal, and with the national government; to appeal for the laying down of arms; to share women's views on certain issues such as compensation, law and order, and security with responsible authorities; to alert foreign development partners to the need for their continued assistance; to share with and give fellowship to victims of the conflict. The Group has engaged in a wide range of activities including meetings with key players such as the militants and their leaders, the Prime Minister and some of his ministers, and police officers. A special</p>

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											service was organized to present the women's plea for peace to the democratically-elected parliamentarians, government leaders, the Leader of the Opposition, diplomatic missions, and other leaders. Visits were made to displaced families. The Group also organized weekly prayer meetings, exchanged baskets of food with some Guadalcanal women living outside Honiara, made provincial tours to Malaita and Guadalcanal, and represented women at various forums and conferences and at the ceasefire talks."
Population Council Institute and UNICEF/Bihar. (2020). <i>Self-help groups: A potential</i>	Organizational report	Qualitative	South Asia	India	SHG	Health: COVID-19	Y	N	Food security	Supportive	SHGs partnered with governments to provide information to community members: "49% of SHG leaders reported that they

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<i>pivot of Bihar's response to COVID-19</i> (COVID-19 Research Results Brief # 7). https://www.popcou.ncil.org/uploads/pdfs/2020PGY_CovidIndiaBrief_07.pdf											were engaged in COVID-19-related community awareness and infection prevention activities, such as sharing information on handwashing, physical distancing, use of masks, and information on symptoms and how COVID-19 spreads. Other SHGs made and distributed masks, connected community members to government resources, and distributed food. SHGs also coordinated with local healthcare organizations."
Porter, M. (2001). Women in "Reformasi" aspects of women's activism in Jakarta. <i>Canadian Journal of Development Studies/Revue canadienne</i>	Peer-reviewed journal article	Qualitative	South Asia	Indonesia	Collective action and grassroots group	Conflict: Sexual violence	N	N	N/A	N/A	Although it is unclear to what extent women's groups existed prior to the shock, this paper describes how the shock reduced group resources. It describes the response of women's groups to shocks and their role in a

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<i>d'études du développement</i> , 22(1), 51–80. https://doi.org/10.1080/02255189.2001.9668802											community response. First, local women's groups of poor women pooled their resources to have access to dried milk (as the economic shock made it too expensive). Then, after mass rapes, large, national women's groups worked more closely with local women's groups on the new shared goal of advocating against violence against women. This provides a case study of how a mass conflict shock can bring women's groups at different levels/functions together for a common cause.
Ravon, L. (2014). <i>Resilience in times of food insecurity: Reflecting on the experiences of women's organizations</i> .	Organization report	Qualitative	Multiple	Peru, Brazil, Guatemala, Nicaragua, El Salvador,	Multiple	Natural: Disaster	Y	N	N/A	N/A	This paper describes how governmental and nongovernmental actors in charge of disaster response and recovery initiatives often fail to include women's

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Oxfam Canada. https://www.oxfam.ca/publication/resilience-in-times-of-food-insecurity-reflecting-on-the-experiences-of-womens-organizations/				South Africa, Ethiopia, Burkina Faso, Niger, Sri Lanka							organizations in disaster response and recovery. Women's organizations often feel "sidelined." "The majority of the women's organizations that were interviewed had never been consulted by aid agencies on resilience and disaster preparedness strategies, and had no contact with government and nongovernmental actors in charge of disaster response and recovery initiatives" (p. 17). "The representatives of women's organizations that were interviewed explained that they aren't valued as legitimate actors in the area of resilience and emergency response because of their perceived lack of technical capacity and reach" (p. 17).

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Ray-Bennett, N. S. (2010). The role of microcredit in reducing women's vulnerabilities to multiple disasters. <i>Disasters</i> , 34(1), 240–260. https://doi.org/10.1111/j.1467-7717.2009.01127.x	Peer-reviewed journal article	Qualitative	Sub-Saharan Africa	India	SHG	Natural: Super cyclone	Y	N	N/A	N/A	The shock reduced savings amounts (p. 251) in groups, leading to conflict between members and denial of withdrawals from the revolving fund and credit to meet needs post-disaster. This was especially true for more vulnerable members, who were particularly negatively impacted. In response, catalyst NGOs used a "vulnerability" analysis to distribute the fund equitably by giving preference to the poor over the non-poor. However, this had unintended adverse consequences: "Theoretically the project appeared promising for the most economically vulnerable members; but in practice, this poverty-driven approach victimised the respondents" (p. 252).

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											<p>It led to "extreme hostility from the least vulnerable members due to their exclusion from the livelihood fund" (p. 252), who then "exerted extreme pressure" on the recipients to deposit savings and repayments regularly regardless of their difficulties (p. 252), and, if they failed, were met with "verbal abuse and fiery argument" (p. 252). Ultimately, the most vulnerable were unable to receive any further credit, which "reproduced and re-intensified local gender and class hierarchies, with more privileged women receiving far greater benefit than the poorer" (p. 253). SHGs that did <i>not</i> adopt the vulnerability analysis actually helped to "diffuse the pressure of the least vulnerable group members</p>

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											on the activities of the SHG" (p. 253), and thus were less impacted than those that did adopt the analysis. The authors also suggest that NGO and SHG activities should have shifted focus from credit distribution and repayment to non-credit activities such as disaster mitigation measures inside the village to more effectively and holistically support women's resilience to multiple disasters (p. 254).
Ruszczuk, H. A. (2014). <i>Local understandings of community resilience in earthquake prone Nepal</i> (Master's thesis, Durham University). Durham e-Theses.	Dissertation	Qualitative	South Asia	Nepal	Multiple	Natural: Earthquake	N	N	N/A	N/A	Women's groups were found to play a role in disaster response and recovery, in partnership with the government and NGOs, by providing and sharing information locally and playing a role in advocacy: "Organisations such as women's groups and youth groups are

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http://etheses.dur.ac.uk/9511/											emerging and serving a valuable role in gaining knowledge about DRR; the women's groups also disseminate knowledge on DRR. The women's groups are viewed by the central government and NGOs as significant agents of change in the local communities and this pathway could be supported. Empowering people in a manner that is relevant to the community members can enhance resilience to disasters through external intervention" (p. 172). "Civil activism is evolving on a grass roots level; groups are emerging in both urban fieldwork locations to support an emerging civil society...Women's groups are a new form of social capital and community formation in both fieldwork

Citation	Document type	Study type	Region	Country	Type of women's group	Shock	Does the study include evidence on the role of the women's group(s) in member's resilience to shocks? (Y/N)	Does the study include a comparison group? (Y/N)	Resilience indicator	Supportive of Members' Resilience?	Description of <ul style="list-style-type: none"> Impact of shock on activities and/or resources of women's group Response or adaptation of women's group to shock Resilience of women's group to shock Role of women's group in community response
											<p>communities. Women are the "key people" according to Lalitpur government officials for DRR activities. Women are key informants and agents of change in the community; they disseminate knowledge throughout the community and also with children and family members. Men "keep it" (the information). This was also the view of an NSET [Nanoscale Science, Engineering, and Technology] official who said they have found women to be more effective than men in terms of disseminating knowledge into the community... Women's groups in both fieldwork sites appear to serve very strong and increasingly different and varied roles in the community. The groups that have been in existence</p>

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											<p>longer have taken on additional responsibility in community development functions such as organising health awareness raising lectures and also organising disaster risk reduction activities in the communities. The groups that struggle in management or institutional capacity are unable and unwilling to take on development functions for the community from my observations of the women's groups. The municipalities seem very willing to give responsibility to these organisations with no compensation. The role of women as mentioned by Fordham, 2009; Pearson, 2007; McEwan, 2003 and their collective activity appear to be increasingly</p>

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											important sources of social capital in the urban settings of Nepal" (p. 154).
Shaji, S. (2020, April 22). COVID-19: Local self-governments, SHGs key to tackling pandemic in Kerala, says former chief secretary. <i>NewsClick</i> . https://www.newscli	News article	Qualitative	South Asia	India	SHG	Health: COVID-19	N	N	N/A	N/A	SHGs partnered with local government to identify and support vulnerable community members and support contact tracing: <ul style="list-style-type: none"> "The panchayat officials along with SHGs identified the people who are in need of essential medicines and they collaborate with the health department." "For the people who are under observation and unable to cook, the government had initiated community kitchens in every panchayat." "For contact tracing for COVID-19 panchayats, SHGs and police were mobilised and these

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											people along with the health officials took a tab on people who are suspected of having been exposed to the virus." "For COVID, experiences from Nipah taught the state on how to trace contacts efficiently, then identifying the high risk people etc. Quarantine and contact tracing were the initial strategies."
Sharma, V., Reddy, B., & Sahu, N. (2014). Sustainable rural livelihoods approach for climate change adaptation in Western Odisha, Eastern India. <i>Development in Practice</i> , 24(4), 591–604.	Peer-reviewed journal article	Qualitative	South Asia	India	SHG	Natural: Climate shocks	Y	N	Migration	Supportive	In response to climate vulnerability, the Western Odisha Rural Livelihoods Project (WORLP) set up over 4254 SHGs with around 65,000 members. These SHGs partnered with local nonprofits and governments to build social capital and support climate adaptation: "The increased number and strength of

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https://doi.org/10.1080/09614524.2014.911817											self-help groups has increased the stock of social capital within the project, and this has immediately reduced people's vulnerability to the negative effects of climate change. Through the groups' exposure to participatory planning processes, people are better able to manage common property resources and are more prepared for crises than those in areas where such groups are nonexistent or weak."
Sim, T., Lau, J., Cui, K., & Wei, H.-H. (2019). Post-disaster psychosocial capacity building for women in a Chinese rural village. <i>International</i>	Peer-reviewed journal article	Qualitative	East Asia and Pacific	China	Other	Natural: Earthquake	Y	N	Mental state (confidence, mood, enriched daily life); Social connectedness and mutual help	Supportive	The group was formed explicitly to help the community cope and adapt to the shock (i.e., the group itself did not adapt to the shock). The aim of these groups was psychosocial capacity and well-being.

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<i>Journal of Disaster Risk Science</i> , 10(2), 193–203. https://doi.org/10.1007/s13753-019-0221-1											
Soares, J., & Mullings, A. Y. (2009). 'A we run tings': Women rebuilding Montserrat (pp. 250–260). In E. Enarson & P. G. Dhar Chakrabarti (Eds.), <i>Women, gender and disaster: Global issues and initiatives</i> . SAGE Publications India Pvt Ltd. https://doi.org/10.4135/9788132108078.n19	Book chapter	Qualitative	Latin America and Caribbean	Montserrat	Other	Natural: Volcanic eruption	Y	N	N/A	N/A	"Harris/Streatham Women's Cooperative (HSWC), a vibrant rural-based group that offered skills training in areas of sewing, fashion designing, tie-dying, baking, making preserves and block making" was "ended with the eruption of the volcano" (p. 5). However, it was superseded by another group called "Women on the Move," which was created in its place to help those women who were left behind after the shock. Women on the Move was "based on the notion that women could assist in meaningfully rebuilding

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											Montserrat only if they could rebuild themselves and their families" (p. 5), and in this way played a role in recovery.
Solution Exchange, Disaster Management Community, and the Gender Community of Practice. (2012). <i>Women and girls: The invisible force of resilience</i> . https://www.preventionweb.net/files/29160_29160drmgenuupdate131012011.pdf	Organization report	Qualitative	South Asia	India	SHG	Natural: Floods	N	N	N/A	N/A	In response to a shock, women's group members in Jeera Araj Birpur, Supaul District, Bihar, received resilience funds to initiate activity on enhancing their capacity-building resilience. A women's group identified jute cultivation as a group initiative with mutually shared labor, which was chosen because of the ability of the crop to prevent future floods due to the crop's interaction with the soil and high absorption ability. When their husbands refused to provide a small piece of land for this activity, the group decided to lease

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											land and start cultivation. All members agreed to contribute and they leased an acre of land for 2 years and began cultivation in June 2012. Women's SHGs, as part of a collective effort with local nonprofits, also "introduced a good practice called 'Aamaar Bazaar' (our market), which enabled women living in flood plains of Brahmaputra River basin to learn, choose, and take up income generation activities from a wide range of choices, which contributed to supplementing the losses they faced due to the loss of their traditional livelihood."
Story, W. T., Tura, H., Rubin, J., Engidawork, B., Ahmed, A., Jundi,	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	Ethiopia	Other savings group	Natural: Drought	Y	Y	Disaster preparedness	Supportive	N/A

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F., Iddosa, T., & Abrha, T. H. (2020). Social capital and disaster preparedness in Oromia, Ethiopia: An evaluation of the "Women Empowered" approach. <i>Social Science & Medicine</i> , 257, 111907. https://doi.org/10.1016/j.socscimed.2018.08.027											
Tawodzera, G. (2012). Urban household survival and resilience to food insecurity in crisis conditions: The case of Epworth in Harare, Zimbabwe. <i>Journal of Hunger & Environmental</i>	Peer-reviewed journal article	Mixed methods	Sub-Saharan Africa	Zimbabwe	Other	Economic : Massive inflation	Y	N	N/A	N/A	The women's group was formed specifically to mitigate the effects of the shock by pooling resources to reduce food insecurity for all members.

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<i>Nutrition</i> , 7(2–3), 293–320. https://doi.org/10.1080/19320248.2012.702469											
Tol, W. A., Leku, M. R., Lakin, D. P., Carswell, K., Augustinavicius, J., Adaku, A., Au, T. M., Brown, F. L., Bryant, R. A., Garcia-Moreno, C., Musci, R. J., Ventevogel, P., White, R. G., & van Ommeren, M. (2020). Guided self-help to reduce psychological distress in South Sudanese female refugees in Uganda: A cluster randomised trial. <i>The Lancet Global Health</i> , 8(2), e254–	Peer-reviewed journal article	Mixed methods	Sub-Saharan Africa	Uganda	SHG	Conflict	Y	Y	Individual psychological distress; Subjective well-being and mental health	Supportive	N/A

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e263. https://doi.org/10.1016/s2214-109x(19)30504-2											
Weingärtner, L., Pichon, F., & Simonet, C. (2017). <i>How self-help groups strengthen resilience: A study of Tearfund's approach to tackling food insecurity in protracted crises in Ethiopia</i> . Overseas Development Institute (ODI) Report. https://www.odi.org/sites/odi.org.uk/files/resource-documents/11625.pdf	Organization report	Mixed methods	Sub-Saharan Africa	Ethiopia	SHG	Natural: Drought, floods, hailstorms	Y	Y	Food security	Supportive	Discusses how the shock revealed "clear limitations" of SHGs to provide support to members in the face of covariate shocks: <ul style="list-style-type: none"> SHGs were "relatively new, especially related to the on-going drought" and "did not (yet) have the means to install water-storage facilities, explore new water sources or develop irrigation systems." "Though CLAs occasionally offered additional help to some individual members, they were generally limited to providing moral support and encouragement to

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											SHGs in situations that affected their entire membership."
WHO Regional Office for Africa. (2018, December 21). Women join hands to oust Ebola from the Democratic Republic of the Congo. https://www.afro.who.int/news/women-join-hands-oust-ebola-democratic-republic-congo	Blog	Qualitative	Sub-Saharan Africa	DRC	Unspecified	Health: Ebola	N	N/A	N/A	N/A	Women's groups responded to the shock by participating in a community response primarily by conducting an informational campaign in collaboration with INGOs. Women's groups' representatives were sent to the homes of local women to speak about Ebola and spread awareness. "WHO educated 132 women leaders from CAF about the disease and then the women conducted an intensive 2-week information campaign in 30 Beni neighbourhoods, including the most dangerous and insecure. Going door to door, the women visited 2,900

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											households in the first three days of the campaign, engaging with almost 13,000 people. In the following 12 days, in meetings at churches and markets, they reached more than 600,000 people explaining Ebola vaccines, contact tracing, the treatment of Ebola, and the vulnerability of women and children to the disease."
Wineman, A., Mason, N. M., Ochieng, J., & Kiriimi, L. (2017). Weather extremes and household welfare in rural Kenya. <i>Food Security</i> , 9(2), 281-300. https://doi.org/10.1007/s12571-016-0645-z	Peer-reviewed journal article	Quantitative	Sub-Saharan Africa	Kenya	Other savings group	Natural: Drought	Y	Y	Income	Supportive	N/A

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Yaron, G., Wilson, D., Dumble, S., & Murphy, B. (2017). <i>Measuring changes in household resilience as a result of BRACED activities in Myanmar</i> . Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED). https://www.itad.com/wp-content/uploads/2018/05/DFID-BRACED_EA3-Impact-Evaluation_Myanmar_Final_Shared.pdf	Organization report	Quantitative	East Asia and Pacific	Myanmar	VSLA; other savings group	Natural: Climate extremes and disasters	Y	Y	Composite resilience index: livelihoods, information, preparedness and coping, safety nets, and decision making and planning	Supportive	N/A
Yonder, A., Akcar, S., & Gopalan, P. (2005). <i>Women's participation in disaster relief and</i>	Organization report	Qualitative	South Asia	India	Multiple	Natural: Earthquake	N	N	N/A	N/A	Women's groups played a role in the community response to the shock. An NGO called Swayam Shikshan Prayog served as

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recovery. Population Council. http://americalatina.genera.org/ciclonew/E4D9_Womens_participation.pdf											<p>an intermediary between women's groups and the government as well as humanitarian organizations in disaster response and recovery. Women's organizations did the following: implemented/monitored response and recovery services, served as intermediary between government and community, provided support and guidance, and supported community mobilization. The paper also describes many benefits of women's organizations playing a role in the community response (p. 35):</p> <ul style="list-style-type: none"> "Women's groups are talented in gathering local information that is difficult, if not impossible for

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											<p>outsiders to access, and in monitoring the implementation of government programs. They can ensure proper allocation of resources by identifying those in need and exposing corruption.”</p> <ul style="list-style-type: none"> ▪ “Women’s groups can collectively mobilize local resources and rebuild community networks to help restore and operate essential services.” ▪ “Grassroots women can function as intermediaries between their communities and the government in a manner that improves the speed, quality, and accountability of the government programs (as in the case of

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											<p>Maharashtra)" (e.g., information dissemination).</p> <ul style="list-style-type: none"> Communities with strong women's groups before the disaster were better able to respond to disasters: "They responded faster and community resources were mobilized more efficiently."

The Evidence Consortium on Women's Group (ECWG) is funded by a grant from the Bill & Melinda Gates Foundation and aims to address evidence gaps on how groups and collectives can contribute to achieving women's empowerment and well-being as well as understand their implementation models and cost-effectiveness. The consortium is co-led by the American Institutes for Research and Population Council, with partners from the University of Washington, Stanford University, the Campbell Collaboration and Makerere University. To learn more, please visit <http://www.womensgroupevidence.org> or email info@www.womensgroupevidence.org.

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