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Increasing knowledge of home based maternal and newborn care using self-help groups: Evidence from rural Uttar Pradesh, India

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ABSTRACT

Background: In India, pregnant women and recently delivered mothers of marginalized communities in Uttar Pradesh (UP) remain un-reached by frontline-health-workers. In these communities, self-help groups (SHGs) have the potential to reach these women with knowledge of home-based maternal and newborn care (HBMNC).
Objective: The study examines the feasibility of SHGs to improve knowledge of HBMNC. The study identifies the facilitating factors and barriers to knowledge change.
Methods: A panel study with a quasi-experimental design was conducted in Jhansi, UP. Peer educators, called *Swasthya Sakhi*, of the SHGs of the experimental area were trained on how to conduct discussions on HBMNC topics. Both at baseline and endline 233 women from the experimental area and 237 women from the comparison area were interviewed to measure their knowledge change in HBMNC topics. The net-effect of the intervention was examined using difference-in-difference (DID) analysis with propensity-score-matching (PSM) controlling for the effect of background characteristics of the participants from two study areas. Generalized-estimating-equation (GEE) was used to identify the facilitating factors and barriers to the knowledge change.
Results: The findings show significant net-increases in women's knowledge for most of the HBMNC topics including danger signs for a pregnant mother and a newborn child, even after controlling for the background characteristics of the participants. The most significant determinant of the increase of knowledge was the women's education.
Conclusion: Findings from the study showed SHGs can increase HBMNC knowledge among women. However, studies with longer duration are required to examine the scalability and sustainability of the intervention.

Introduction

Uttar Pradesh (UP), the most populous state in India, has 28 percent of India's neonatal deaths and 35 percent of its maternal deaths yet the state population contributes only 16 percent of the country's population [1,2]. Many of these deaths can be averted with home-based maternal and newborn care (HBMNC) provided by frontline health workers (FLWs) [3–5]. Recent studies show that five to six years after the introduction of *Janani Suraksha Yojana*,[a] a government-run health scheme to reduce maternal and neonatal deaths, FLWs like Accredited Social Health Activists (ASHAs) in Bihar and UP cover only 40–50% of women in their catchment areas [6,7]. These 'unreached' people are mostly from marginalized families, live in remote hamlets, and belong to scheduled castes (SCs)[b] scheduled tribes (STs) or other disadvantaged groups such as minorities and poor families. Media such as newspapers, television, and radio do not reach about 65–75% of women in these states [6,7].

Since the marginalized groups are not reached through FLWs; it is essential to involve other departments and platforms to cover the currently unreached communities. Prior to the selection of any such department or platform, it is critical to assess whether they share similar commitments to improve the family health of the marginalized

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[a] Janani Suraksha Yojana is a health scheme of the Government of India under National Rural Health Mission, aims to reduce maternal and neonatal deaths by promoting institutional delivery. The scheme engaged accredited social health activists (ASHAs) to establish a link between the government health system and poor pregnant women.

[b] Scheduled caste and scheduled tribes are marginalized groups in India designated by the government and recognized by Constitution of India.

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groups–as intended by the program. Such departments and platforms include Integrated Child Development Services, Ministry of Panchayati Raj, and Self-Help Groups (SHGs). SHGs are developed and promoted by various organizations like *Rajiv Gandhi Mahila Vikash Pariyojna (RGMVP)*, *Jeevika*, *Parivartan*, Women Empowerment Corporation, *Mahila Samaksha*, etc. [8].

Self-help groups in India started to form in the mid-1980′s, mainly in Southern Indian states. In 1989, the National Bank for Agriculture and Rural Development (NABARD) gave grants to several action research projects to mitigate poverty through SHGs [9]. In 1990, the Reserve Bank of India accepted the SHG as an alternative credit model that allowed banks to lend money directly to the SHGs. This led to the eventual launch of the SHG-Bank Linkage Program in 1992. In the mid-1990′s the SHG movement spread across central and northern states including Bihar, Gujrat, Haryana, Karnataka, Madhya Pradesh, and Uttar Pradesh [10]. The development projects involving SHGs have started to expand in diverse sectors, including maternal and child health.

Worldwide evidence shows that women's groups practicing participatory learning and action can improve maternal and child survival in low-income settings [11]. Studies from India, including the studies from the Northern Indian states, also demonstrated improvement in maternal and newborn health through community-based interventions [12–15]. Inspired by the findings of earlier studies, Bill and Melinda Gates Foundation initiated several projects involving SHGs in Bihar and Uttar Pradesh. *Parivartan* project in Bihar and Uttar Pradesh Community Mobilization Project in Uttar Pradesh targeted women of rural marginalized communities to disseminate key health messages to improve maternal and child health. In Uttar Pradesh, the project is utilizing the federated platform of RGMVP at scale across the state. Currently, RGMVP SHGs have expanded to 42 of UP's 75 districts, totaling more than 125,500 SHGs and growing.

RGMVP's self-help groups are voluntary groups of 10–12 women in villages, who meet four times a month—usually for micro-financing. In meetings, they also discuss and resolve issues of concern in their communities. Sometimes community mobilizers or coordinators facilitate the activities of SHG, for example, keeping records of who has been trained by RGMVP.

RGMVP's self-help groups maintain a federal structure (Fig. 1). In general, the SHGs have one or two representatives of 10–15 SHGs from a *Gram Panchayat* (GP)[c] to form a village organization (VO), and around 25–30 VOs are federated at the block level [16]. SHGs of RGMVP have the potential for social mobilization i.e. to engage and motivate a wide range of partners and allies at national and local levels to raise awareness and demand for healthcare services [17].

Some earlier studies have reported that there is an association between SHGs and improved health [18–21], including the utilization of SHGs in health promotion [22]. A recently published study, using a nationwide sample in India, shows that the presence of SHGs in the village is associated with higher institutional delivery, higher colostrum feeding, higher knowledge, and utilization of family planning products and services [23]. Saha and his colleagues explained that SHGs provide the communities with a voice to raise their problems and builds solidarity through the promotion of a shared vision and collectivity [23]. They also expressed the need for health programs to build on the solidarity and social capital generated through SHGs.

Using a longitudinal analysis, Kincaid demonstrated an effective use of the social network approach to sustainable change in contraceptive behavior in Bangladesh [24]. The study demonstrated that women who participated in a social network were more likely to adopt modern contraceptive than women who only experienced conventional home visits by Family Welfare Assistants. The social network approach was designed to increase discussions of family planning among women, to encourage discussions with spouses, and to improve contraceptive knowledge. The approach increased the use and rate of continuation of modern contraceptives, which resulted in sustainable behavior change. Other studies have shown that community mobilization and networking among civil society organizations, like SHGs, can lead to members of the group being better informed about their rights in the health system. Networking also plays a key role in empowering marginalized and disadvantaged groups and bringing them together to demand their rights to services in the existing health system [25–27].

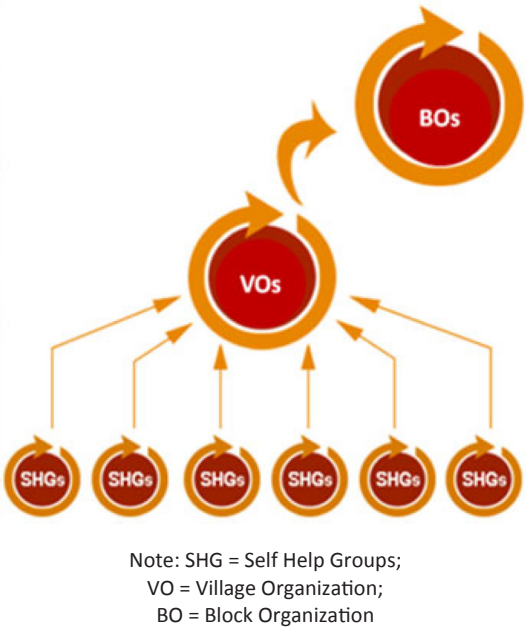

Fig. 1. Federal structure of self-help groups of Rajiv Gandhi Mahila Vikash Pariyojana. Note: SHG = Self Help Groups; VO = Village Organization; BO = Block Organization.

The current literature demonstrates that participatory learning leads to improvements in knowledge and healthy practices. Involving SHGs in health messaging could make these improvements more sustainable because of the voluntary-nature of participation. Therefore, an evidence-based recommendation could motivate the program managers to utilize SHGs in behavior change communication for HBMNC. In view of the above, the objectives of this study were: (1) to assess if SHGs are an effective medium to disseminate knowledge of home-based maternal and newborn care, and (2) to identify the factors that facilitate or hinder the intervention.

It was hypothesized that the discussion on HBMNC at SHGs meetings will increase the knowledge of the women on HBMNC. This increase in knowledge will lead to improvement in healthy behaviors of maternal and newborn care.

Methods

Study design and study setting

A quasi-experimental panel-study was designed to answer the study question. It was decided that RGMVP will implement the intervention in the study area and the research team will evaluate the impact of the intervention. The study was conducted in two administrative blocks of Jhansi district, Uttar Pradesh: Bangra and Baragaon. These blocks were selected because RGMVP's SHG federations were present in those two

[c] *Gram Panchayat* is the smallest unit of local administration in India. A *Gram Panchayat* usually consist of one or two revenue villages and a few smaller hamlets or *Purvas*. People of a *Gram Panchayat* elect their own local self-government to execute different development and welfare programs of the state and central government.