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Assessing the potential of self-help group women for improving reproductive health of women in a tribal block of Maharashtra, India

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***Background & objectives*: In the current health system, cash incentives are given to accredited social health activists for referring women to public health facilities for specific maternal and child health services, however many reproductive health problems are not included in these services. The objective of this study was to assess the impact of involvement of self-help groups (SHGs) in improving reproductive health seeking behaviour and service utilization by tribal women.**

***Methods*: An experimental study was conducted in two tribal blocks of Nasik district (Kalvan and Surgana) in Maharashtra, India, over a period of 18 months. Interventions included training of SHG women and providing incentives to them for conducting health education sessions for reproductive age group women in the community and referring those with the requisite problems, to the health facilities. Pre- and post-intervention focus group discussions and in-depth interviews among SHG women were conducted. Training of service providers on diagnosis and treatment of reproductive morbidities was done, and health service utilization was assessed.**

***Results*: Sixty five per cent of the referred women with reproductive morbidities availed services at the public health facilities. A review of records of women seeking services for reproductive health problems showed that there was a significant improvement in the intent for seeking services in the study block as compared to the control block (χ^2–9.06, *P*<0.002).**

***Interpretation & conclusions*: This study demonstrates the feasibility of utilizing the potential of SHGs for improving reproductive health seeking behaviour of the tribal women. The results suggest that this model could be scaled up to address the neglected reproductive health needs of women without burdening the existing human resources.**

Key words Maharashtra - Nasik - self-help group - tribal - women

Microfinance programmes such as for engaging self-help groups (SHGs) in India have been commended for their positive economic impact and women empowerment[1]. SHGs are a group of 10-20 members

having homogeneous socio-economic background and coming from a small contiguous area, who operate on the principle of self-help, solidarity and mutual interest. This model emerged in the 1980s and 1990s with the support of central and State governments, the National Bank for Agriculture and Rural Development, the banking sector and NGOs and has spread throughout the nation, particularly in the rural areas[2]. In India, most of the activities of SHGs are focused on saving and credit activities. There are only a few studies in our country in which SHGs have been involved in health sector.

There is a large burden of reproductive morbidities [reproductive tract infections/sexually transmitted infections (RTIs/STIs), prolapse, pelvic inflammatory disease (PID), infertility, *etc*.] among women of reproductive age group in India[3,4]. However, community-based data on chronic obstetric morbidities (COM) are hardly available, as most of the data are hospital based. A community-based study conducted across six primary health centres (PHCs) located in Nasik district, Maharashtra reported the prevalence of defined COM among women upon clinical examination as genital prolapse (7.1%), chronic PID (2.5%), secondary infertility (1.7%) and fistula (0.08%)[3]. Most of the women suffering from these morbidities did not seek treatment and suffered in silence for years. The available human resources in the current health system of India do not necessarily cater to all the needs of the population. Hence, incentives are being given to accredited social health activists (ASHAs) for referring pregnant, post-partum women and children and women who need contraception to the government health facilities under the national programmes. Despite this, no incentives are given for referral of women with reproductive morbidities resulting in poor treatment seeking behaviour, particularly for gender-sensitive health problems. In this scenario, the potential of SHGs who have a good rapport with the community and can act as 'change agents' for improving reproductive health seeking behaviour and service utilization can be explored, especially among tribal women. In the present study, morbidities in pregnancy and post-partum period were not included, as already incentives are being given to the ASHAs for referring women with these morbidities in the current programmes of the Government of India. The present article describes the impact of involvement of SHGs (their experiences and challenges faced by them) in improving reproductive health seeking behaviour and service utilization by tribal women.

Material & Methods

The study was a joint collaboration between ICMR-National Institute for Research in Reproductive and Child Health (NIRRCH), Mumbai, Mahila Arthik Vikas Mahamandal (MAVIM) (A State Women's Development Corporation of Government of Maharashtra) and the Public Health department of Nasik district. MAVIM works as a nodal agency to implement the women's development programmes through the medium of SHGs. Ethical approval from the Institutional Ethics Committee of ICMR-NIRRCH, Mumbai was obtained before the initiation of the study. Permission was obtained from the State Health Department of the Government of Maharashtra for implementation of the study in Nasik district. Written informed consent was obtained from the self-help group (SHG) women participating in focus-group discussion (FGD) and in-depth interview (IDI).

This experimental study was conducted in two tribal blocks of Nasik district in Maharashtra, India, from May 2018 to November 2019 (Supplementary Figure). Study area selected was Kalvan and control area was Surgana which matched the demographic characteristics (Table I)[5]. Kalvan block had eight PHCs, one rural hospital (RH) and one subdistrict hospital. In Surgana, there were seven PHCs and one RH.

In the control block, no interventions were provided through the SHGs. In the study block, two community-managed resource centres (CMRCs) under MAVIM were involved. A total of 56 villages catering to the two CMRCs were selected. The total population of the selected villages was 77,933, out of which 55,786 (81%) belonged to scheduled tribes. The total eligible women for whom education sessions were to be conducted in the reproductive age group were 16,754 (approximately 21% of the total population). A total of 112 SHG women were selected for the study (two SHG women from each of the 56 villages). The inclusion criteria for the selection of SHG women included the willingness of the SHG member to provide intervention in the study block for one year and those functioning only under MAVIM.

Pre-intervention phase: In the pre-intervention phase, Health Management Information System (HMIS) data on reproductive health morbidities of the last one year were reviewed at all health facilities in both the blocks. Training on the prevention and management of reproductive morbidities was conducted for medical officers, auxiliary nurse midwives (ANMs)

Table I. Demographic characteristics of Kalvan and Surgana blocks in Nasik district as per the census 2011[5]

	Kalvan	Surgana
Total population	208,362	175,816
ST population (%)	68.9	96.5
Literacy rate (%)	68.5	68.1
Sex ratio	963	1001
Child sex ratio	918	960
Work participation rate	54.3	55.4
Occupation		
Cultivators	52.3	47.5
Agricultural labourers	35.3	46.8

ST, scheduled tribe

and multipurpose workers of all the health facilities in both the study as well as the control blocks for one day. The training sensitized them about the study and the focus on reproductive morbidities (gynaecologic and obstetric) including RTIs/STIs. The MOs and ANMs were informed that women with reproductive morbidities would be referred to the health facilities with a referral slip and they were supposed to stamp it after providing services to them. Subsequent to the training, it was ensured that facilities were equipped in terms of supply of medicines from the district health system and maintaining the record of cases availing services for various reproductive morbidities in both the blocks.

Five FGDs each in the pre- and post-intervention phase were conducted in the study block, while no FGDs were conducted in the control block. During the pre-intervention phase, the FGDs were conducted in the study block (Kalvan) with the objectives to assess the awareness, knowledge and perceptions of SHG women about reproductive morbidities, whether they received training and their opinion about the treatment available for reproductive morbidities at the government health facilities. The FGDs were conducted in the local language (Marathi) with a guide having issues to be discussed among the SHGs.

Out of the selected 112 SHGs for the study, 106 SHG women who participated in the training were included in the study. One day interactive training was imparted to them on basic aspects of reproductive morbidities to improve their awareness and knowledge on this aspect and empower them to conduct education sessions. They were designated as community resource persons and were provided with badges, training booklets in local language with pictorial messages and referral slips. They were then asked to conduct the education sessions with the help of flip charts given to them as they would do in the community. There was active participation from the SHG women during these sessions. Furthermore, that for initial three months, they were expected to conduct three sessions every month so as to cover all the eligible women in the community. They were explained that when women would approach them with reproductive health problems, they were to provide the referral slip to these women. The referred women would seek services from the health facilities with the referral slip and return the stamped slip to the SHG woman. The SHG women were asked to keep a record of the number of sessions conducted by them in each village and the number of women seeking services at the health facilities. Subsequently, for the next nine months, each SHG woman was expected to conduct one follow up session every month to take feedback from women whether they had approached the health facilities. They were informed that they would be given incentives for conduction of education sessions. Meetings were conducted at PHCs in the study block to introduce these trained SHGs to the health providers, and a coordinated interaction with talukas, district health officials and officials at Civil Hospital Nasik was facilitated. Out of the 106 women, 91 trained SHG women conducted health education sessions in community. Fifteen women dropped due to some personal reasons.

Post-intervention phase: In the post-intervention phase, records of women seeking services for reproductive morbidities in both study and control areas were obtained. To obtain feedback from the SHG women, five FGDs were conducted, in which 47 SHG women had participated (8-10 women in each FGD). Majority (78.4%) were educated up to higher secondary level and 87 per cent were engaged in farming. Purposive sampling was done for selection of these 20 women from both the CMRCs, who had not participated in the post-intervention FGDs. IDIs with selected 20 SHG women were also conducted in this phase.

Results

Findings of pre-intervention FGDs: Fifty seven SHG women participated in five FGDs (10-12 women in each FGD). Majority (68.4%) were educated up to higher secondary level and 77 per cent were engaged in farming. The findings indicated that none of the SHG women had received training on reproductive

health. Local terminologies used by the women in the villages were elicited during the FGDs. SHG women reported that they were willing to conduct sessions on reproductive health for other women in the villages if training and some incentives would be given to them. The study results are described broadly under two categories, processes and outcomes.

Processes: These describe the supply-side responses that included community mobilization by SHG women and coordination of the health system to meet the demand for services.

During the intervention period of one year, the trained SHG women in selected villages conducted health education sessions on reproductive morbidities for ever-married reproductive age group women (15-49 yr) in the community who were monitored by the research team. For the initial three months, majority of the SHG women conducted 8-9 sessions as per the target and each session was attended by approximately 20-25 women. They reached out to most of the reproductive age group women in their villages with education sessions. Out of the total 16,754 eligible women, 15,087 (91%) tribal women were sensitized by the SHG women during the health education sessions. For the next nine months, SHG women conducted a total of 5-6 follow up sessions and the number of participants was 10-15. Response of the health system was encouraging in terms of health staff providing services at the health centres in the study block. Appropriate referrals were done by the service providers at higher levels in the study block and to district hospital, Nasik.

Outcomes: These refer to the community participation in these sessions, women coming forth to speak about their problems and the actions taken by them with support of SHGs and their families to empower them to seek care for their health problems, also improved reproductive health seeking behaviour of the tribal women in the study block as compared to the control block.

After SHG women initiated health education sessions, women in villages started seeking services from the health facilities. Out of the 505 referred women, 328 (65%) availed services at the health facilities, majority of whom sought to government health facilities. Women seeking services belonged to tribes such as *Kokana*, *Bhil* and *Mahadev Koli*. Major issues for which women sought care were prolapse, abnormal vaginal discharge, lower abdominal pain, menstrual problems and infertility (Table II)**.** The average age of women seeking services for abnormal vaginal discharge, lower abdominal pain and menstrual problems was 32 yr. For prolapse, it was 40 yr, while for infertility, it was 27 yr. Surgeries for uterine prolapse and counselling and treatment of infertility that resulted in five conceptions were some of the major services that were provided to these women.

A review of records of women seeking services for reproductive health problems in both study and control areas (Table III) showed that there was a significant improvement in the women seeking services in the study block as compared to the control block (χ^2–9.06, P<0.002).

Experiences and challenges faced by self-help group (SHG) women in the intervention phase: Post-intervention FGD findings indicated that some of the women in villages were not ready to attend the sessions as they were not interested, as they had work at home or on the farm or their family members did not allow them (Some of the SHGs said *'Some-times women wished to come for the session, but their family members would not allow her to attend the sessions*'). For follow up sessions, SHG women reported that as the attendance was lesser as compared to the initial sessions, they went in farms or at common meeting places to conduct these sessions. As reported by the SHG women, majority of the referred women with reproductive health problems in the villages sought treatment from the government health facilities and majority of them were satisfied with the treatment provided at these centres. Few SHG women reported that in their village, women did not seek services due to shyness, lack of awareness and doctors at PHCs being male (The women in villages expressed *'If any person comes to know about our diseases the villagers tease us'*).

The SHG women opined that their refresher training should be organized regularly. They felt that accompanied referrals by them were needed in some villages and funds for travel should be made available in such cases. Furthermore, they felt that ultrasonography facilities should be available in rural and subdistrict hospital levels; education and treatment for breast lumps should be available at the PHCs. They expressed that *in vitro* fertilization facilities should be made available at the block level for the couples with infertility.

Findings of IDIs indicated that some of the SHG women reported difficulty in motivating women for

Table II. Details of women who availed services in the study block (Kalvan) at government and private health facilities

Reproductive morbidities	Number of women given referral slips	Number of women availing services, n (%)	n	
			Government	Private
Symptoms suggestive of prolapse	77	59 (77)[#]	43	16
Increased/abnormal vaginal discharge	89	77 (87)	62	15
Lower abdominal pain	134	90 (67)	70	20
Menstrual problems	92	50 (54)	32	18
Infertility	67	33 (49.2)	25[*]	08
Burning during micturition	38	12 (32)	7	05
Fibroid in uterus	2	2 (100)	1	1
Fibroadenoma in breast	2	2 (100)	1	1
Other (warts in vagina, swelling on uterus, *etc*.)	4	3 (75)	-	3
Total	505	328 (65)	241 (73)	87 (27)

[#]5 women operated for third degree prolapse, [*]5 women conceived after counselling

Table III. Number of women availing services for reproductive morbidities in study and control blocks

Data as per HMIS	Number of women availing services for reproductive morbidities	
	Kalvan (study block)	Surgana (control block)
Pre-intervention	50	17
Post-intervention	897	128

χ^2=9.06, P<0.002. HMIS, health management information system

attending the education sessions due to lack of interest. They expressed that they overcame these challenges by conducting sessions in the fields and on weekly market days of the village. They reported that majority (75%) of the referred women were satisfied with the treatment received at the government health centres. Almost all of them (90%) reported that accompanied referrals would be better to improve the number of women seeking services from the health facilities. However, issues such as some of the women were not receiving the stamped referral slips from the health centres where they availed the treatment were also reported. All of them opined that it is feasible to scale up the project in other areas of Nasik district and also in other tribal areas of Maharashtra.

Data triangulation revealed that findings from post-intervention FGDs and IDIs showed similarities. Overall referred women availed services and family support emerged as a strong determinant of health seeking behaviour among women. SHG women opined that accompanied referrals by them could further improve the reproductive health seeking behaviour among these women.

Discussion

In India, most of the activities of SHGs are concentrated towards savings and credit activities. Impact of SHG activities on the empowerment of rural women has been explored in only a few studies in our country. A study conducted in Nagpur district of Maharashtra indicated a significant difference in the mean empowerment index of psychological, cultural, social, economic and political empowerment of rural women from 26.76 per cent before and 73.91 per cent after the participation in MAVIM activities[6]. A systematic review including studies from various countries indicated that SHGs have positive effects pertaining to three dimensions of women's empowerment including more economical and social empowerment, ability to participate in decision-making focused on access to resources, rights and entitlements within communities, and as a result more political empowerment[7].

There are only a few studies from our country in which awareness, knowledge and perceptions of the SHG women regarding reproductive morbidities have been studied.

A qualitative cross-sectional study[8] was conducted at the village level in six districts of Maharashtra to assess the knowledge, attitudes and practices of SHG women regarding reproductive health. The study highlighted the available knowledge and existing gaps on various reproductive health issues related to their gynaecological problems, pregnancy, delivery and

post-partum period, abortion, infertility, menopause, family planning, reproductive tract cancers and sexual health concerns among the SHG women[8].

A community based cross-sectional study[9] was conducted in an urban setting of Bengaluru, India. Ninety five women involved in SHG for one year were interviewed by a pre-validated questionnaire. Regarding the impact on health knowledge and awareness, 69.5 per cent of the SHGs had increased awareness regarding health and hygiene, 21 per cent had improvement in personal health, while 68.4 per cent decided to seek medical care for health related issues on their own. The study concluded that SHG is a useful platform in providing income generating activities; however, there was no significant improvement in health behaviour or knowledge about health related issues.

So far, there are only a few studies in which SHG women, the potentially empowered groups, are involved for interventions in health programmes. The potential of SHGs still remains unutilized, especially in health sector, particularly for reproductive and child health services in our country. A study conducted by the Population Council in Bihar evaluated behaviour change health intervention through SHGs with an aim to promote healthy maternal and newborn care (MNC) practices among the more socially and economically marginalized groups[10]. This study used a pre-post quasi-experimental design, and included 545 SHGs. The findings suggested that behaviour change communication on life saving MNC practices with SHGs led to a substantial improvement among the most marginalized women in the study area.

Another study was undertaken in Deoghar district of Jharkhand with the specific objective of estimating the level of healthcare services provided by the SHGs and the awareness and satisfaction level of their members[11]. Field surveys, interviews and select case studies among 100 SHG women were conducted. FGDs were conducted for determining individual members' perceptions about roles, expectations and health achievements. Regarding improvement of women's health status through SHGs, it was observed that most of the SHGs who were focusing on economic issues had not performed satisfactorily in enhancing the knowledge and awareness on health related issues among other women.

These findings are, however, not similar to the findings of the present study. Collaboration with MAVIM provided a platform through which SHG women conducted education sessions which covered a fairly high percentage (91%) of total eligible women in the selected villages. Out of the referred women by the SHG women, 65 per cent of the women availed services at the health facilities, majority of them at the government health facilities. Women availing services in the study block Kalvan were quite high as compared to the control block Surgana. Providing incentives to the SHGs was a positive factor for them to conduct the education sessions, follow up sessions and referring women to health facilities. While the proactive role played by the SHGs reflects the feasibility of involving them to facilitate women seeking care, the attendance of the tribal women for these sessions and improved health seeking behaviour reflects the acceptability of SHGs by these women to enable them to seek care from the health facilities.

Lower abdominal pain and menstrual irregularities reported by the women in the present study may be due to endometriosis. This should be diagnosed as it may significantly affect women's quality of life and psychological well-being[12,13] . Endometriosis could also be one of the causes of infertility in some of these women.

'Hawthorne effect'[14] may have led to the improved performance of SHG women in delivering the interventions. However, there are many variables which may have affected the outcome in terms of the success of intervention. Hence, the success of the intervention cannot be attributed to this effect alone.

The present study was not without some limitations. The comparison of data pertaining to women availing services for reproductive health problems in the pre- and post-intervention phase had some limitations. In the pre-intervention phase, records were obtained from the HMIS data, which could be underreported. In the post-intervention phase, as sensitization and training of the health staff of all the service providers in both study and control blocks were done, there was adequate reporting. As pre- and post-intervention data were not available for the selected villages in both the blocks, it was difficult to delineate from the records alone whether the increase in numbers availing services was actually because of the interventions. However, the data indicate that women availing services in the study block were quite high as compared to the control block which could be a result of interventions provided through SHG women in the study block.

Overall this study demonstrates the feasibility and acceptability of utilizing the potential of SHGs for

improving reproductive health seeking behaviour and service utilization by tribal women. SHGs are a potential workforce for improving reproductive health of tribal women, which could be utilized in the existing health system of our country. This model could be scaled up to in other areas of Maharashtra and also in India to address neglected reproductive health needs of women without burdening the existing human resources.

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***Conflicts of Interest*:** None.

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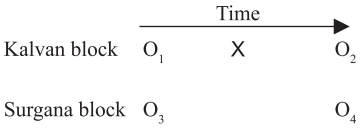

Supplementary Figure. Study design: Experimental. O1 indicates pre-intervention measurement (record of women with reproductive health morbidities availing services at all the health facilities in Kalvan block), while O2 indicates post-intervention measurement (record of women with reproductive health morbidities availing services at all the health facilities) in Kalvan block, O3 indicates pre-intervention measurement (record of women with reproductive health morbidities availing services at all the health facilities in Surgana block), while O4 indicates post-intervention measurement (record of women with reproductive health morbidities availing services at all the health facilities) in Surgana block, X stands for intervention (intervention was in the form of health education sessions conducted by SHGs for other women in the community. SHG, Self-help group.