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Research Article

Empowerment and engagement of SHGs against RTI/STI in Karnataka, India: an interventional study

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ABSTRACT

Background: Reproductive Tract Infections (RTIs) including Sexually Transmitted Infections (STIs) are 'silent' epidemics and are recognized as public health problem and rank second as the cause of healthy life lost among women of reproductive age after maternal morbidity and mortality in developing countries. Development and use of IEC material along with active participation by the community ensures delivery of appropriate information and knowledge to people which in turn empowers them to make informed decisions about their health.
Methods: This was a 'Multi-centric action research demonstration study' to empower and engage the Self Help Groups (SHGs) women by creating awareness and sustaining interest through lesson plans in the IEC material regarding prioritized problem, required interventions and their access for syndromic recognition of the RTI/STIs. As an intervention, series of workshops were conducted with the help of pre-developed IEC material. 400 households (200 from each intervention and control sites) of SHG women were interviewed for baseline and endline each.
Results: Intervention was found effective in the form of a significant improvement in the level of awareness about RTI/STI, correct knowledge about white discharge, capability to identify the symptoms of RTI/STI and health seeking behavior of the respondents.
Conclusion: This study provides experience of the feasibility, efficacy and impact of health education interventions and point out that cost-effective strategies for prevention of RTI/STI are needed through information, education, and behavior change.

Keywords: Health education, Health seeking behavior, IEC material, RTI/STI, Self help group (SHG)

INTRODUCTION

Reproductive Tract Infections (RTIs) including Sexually Transmitted Infections (STIs) are 'silent' epidemics and are recognized as public health problem and rank second as the cause of healthy life lost among women of reproductive age after maternal morbidity and mortality in developing countries.[1,2] The constant badgering due to reproductive ill health gives a subliminal message to women that they are physically vulnerable and inferior. Thus, there is strong need to evaluate psychosocial dynamics of community-based programs and empower and engage the women, which can have an impact on this staggering burden of reproductive ill-health and disease.

It is hypothesized that if the women are given an intervention regarding the prevention of RTI/STIs at the beginning of their sexual life then there might be a long

term impact on reduction in incidence and prevalence of RTI/STIs. However, in a conservative society like India, talking about sex, RTI/STIs and other gynecological problems of women is a taboo. Across all strata of the society, these issues are not discussed with the girls before marriage.[3,4] Even teachers and parents hesitate in talking sexual health issues with the young girls and boys. So in a country like India it would be difficult to intervene before marriage. Besides that, a 'culture of silence' prevails that inhibits women from revealing their private problems to others due to various social factors associated with RTI/STDs. Thus, creating awareness about the problem and its management could be an important step to change healthcare-seeking behavior.[5] Realizing it, this research work with a specially designed preventive intervention was formulated to study the impact on knowledge, attitude and practices regarding RTI/STI among Self Help Groups (SHGs) women.

Sustained behavioural change is a long-drawn process. Communication strategies at the community level may have great role to influence the change in knowledge, attitude and practices to prompt people to seek health consultation. Information, Education and Communication (IEC) tools are integrated into public health programs as a means to bring about changes in attitudes, perceptions and behavior of people in the community. Development and use of IEC material along with active participation by the community ensures delivery of appropriate information and knowledge to people which in turn empowers them to make informed decisions about their health. IEC involves building social networks and communicating the information through appropriate channels and methods in a manner that is culturally accepted by the community. Health care workers in rural areas act as change agents and are trained to communicate the information contained in these materials to the community.

With this background the present study was designed with the objective to empower and engage the SHG women against RTI/STI with the use of IEC strategy so that they can act as change agents for other women in the community.

METHODS

The data used for this paper has been taken from the original study which was a 'Multi-centric action research demonstration study' to sensitize, mobilize and engage women through the SHGs, to take care of their reproductive health, including cervical cancer, and act as change agents for other women in the community. The study was conducted for a period of one and half year (from May 2012 to October 2013). Initial three months was preparatory phase which was utilized for extensive literature search, designing and finalization of interview schedules, baseline data collection in the form of Household Surveys (HHS) and FGDs and development of IEC material. Next one year was intervention phase in which series of workshops were conducted with the help of pre-developed IEC material to increase the awareness of SHGs members. Last three months were utilized for end line survey by means of HHS and FGDs, data analysis and write up work.

Overall this multi-centric study was spread over five districts in 3 states namely Karnataka, Rajasthan and Chattisgarh. The Kolar district in Karnataka was the primary intervention site. From Kolar district an intervention taluk (Bangarpet) was selected from eleven taluks of Kolar District by simple random sampling. To establish an adequate counterfactual, a nearby taluk (Malur) with similar geographical, climatic, development and health indicators was selected as control by adopting purposive sampling. In both these taluks, quantitative evaluation using household surveys and qualitative evaluation with FGDs were done at baseline and end line. As an intervention, a total of fifteen workshops, each consisting three days, targeting 75 SHGS were conducted in Bangarpet taluk. Overall the sensitization was done with the help of local NGOs working in intervention sites. In Dharwad, Koppala, Jaipur and Raipur districts only qualitative evaluation using FGDs were done, and only two workshops, each consisting three days, were conducted. Only quantitative data analysis of intervention district of Karnataka has been included in the present article.

Sample size

As per the literature search and by assuming the minimum prevalence (50%) for awareness about RTI/STI among SHG women and considering 10% permissible level of error in the estimated prevalence, the sample size was calculated using the formula $n = z^2pq/L^2$. Thus the total sample size was "$n= (1.96)^2x50x50/(5)^2 = 384.16$. This was rounded up and fixed to 400. Eventually, 400 households (200 from Bangarpet and 200 from Malur) of SHG women were interviewed for baseline and endline each.

Selection of households

There are 3 Community Mobelization Research Centres (CMRCs) in Bangarpet taluk (Kamsamudra, Topanahalli and Buddikotte) and 2 CMRCs in Malur taluk (Thoralakki and Dinnahalli). From each CMRC, 6 villages were selected by simple random sampling method. Thus a total of 30 villages were selected for the study. In the selected villages total enumeration of SHG women was done to prepare a sampling frame. The required study subjects for each taluk were selected adopting Probability Proportion to Size (PPS) sampling technique. In order to get required study subjects, simple random sampling was done.

Data thus generated was analyzed using SPSS v16.0. Appropriate tables and graphs were generated and Chi-square test was applied to draw inferences. The statistical

significance was computed using the chi-square test for proportions and a 'P value' of <0.05 and <0.01 were taken as significant and highly significant, respectively.

RESULTS

Table 1 presents the socio-economic and demographic profile of the respondents in Malur and Bangarapet taluks in Kolar district during baseline and end line surveys. The total number of households covered during baseline survey was 397 (200 in Malur and 197 in Bangarapet) and end line survey was 401 (197 in Malur and 204 in Bangarapet). It is evident from the table that the mean age of the respondents during baseline survey and end line survey was 31.4 years (SD=6.7) and 32.7 years (SD=7.3), respectively. There was no significant variation in the mean age of the respondents in Malur and Bangarapet taluks. More than 95 percent of the respondents in both the taluks were currently married. More than 60 percent of the respondents in Malur and around three fourth of the respondents in Bangarapet taluk were having nuclear family. A vast majority of the respondents were Hindus. With regard to caste of the respondents, more than 35 percent of the respondents belong to scheduled caste or scheduled tribes and more than one fourth belong to Other Backward Castes (OBC) in both the taluks. More than 90 percent of the respondents have a ration card. It is to be noted here that majority of the respondents in both Malur and Bangarapet taluks belong to either Below Poverty Line (BPL) or extremely BPL category.

Table 1: Socio-economic and demographic profile of the respondents.

Characteristics	Baseline		End line	
	Malur	Bangarapet	Malur	Bangarapet
	% (N)	% (N)	% (N)	% (N)
Age				
Less than 25 years	14.5	13.7	12.8	9.8
25-29 years	29.0	23.4	25.6	24.5
30-34 years	18.5	22.3	14.9	17.6
35-39 years	21.5	26.9	24.6	27.9
40 years and above	16.5	13.7	22.1	20.1
Mean age	31.5 SD=6.9	31.4 SD=6.5	32.8 SD=7.5	32.6 SD=7.1
Marital status				
Married	99.0	95.9	97.0	94.1
Others	1.0	4.1	3.0	5.9
Type of family				
Nuclear family	68.1	74.1	61.1	73.4
Joint/third generation	31.9	25.9	39	26.6
Religion				
Hindu	95.5	94.4	96.4	97.5
Others	4.5	5.6	3.6	2.5
Caste				
SC/ST	36.9	35.4	39.6	36.3
OBC	25.8	28.7	26.9	31.9
Others	37.4	35.9	33.5	31.9
Has ration card				
Yes	94.0	92.9	93.9	97.1
No	6.0	7.1	6.1	2.5
Economic status*				
BPL/extreme BPL	87.2	97.3	98.9	99.5
APL	10.6	2.2	1.1	0.0
Don't know	2.1	0.5	0.0	0.5
Total	100 (200)	100 (197)	100 (197)	100 (204)

Note: *the proportion has been calculated out of those who have ration card

Table 2 shows the distribution of the respondents based on their reported awareness about RTI and STI. During baseline survey, the proportion of respondents having awareness about RTI/STI was very low than expected (~30%) which was almost similar for both Malur and Bangarapet. The major sources of information on RTI/STI among respondents in the study area were doctors followed by health workers, televisions, radio, relatives/friends, cinema, husband and newspapers/books/magazines. The planned intervention could make a significant (P <0.01) difference in awareness level of respondents about the RTI/STI in both intervention and control taluks, and the corresponding percentages during endline survey were 99 percent and 25.9 percent, respectively. Out of 99 percent of SHG women in intervention taluk, who could make aware about RTI/STI, around 90 percent reported information transmission through IIHMR training, as the major source of information about RTI/STI along with other sources which were explained them during workshop sessions.

During baseline survey, around 77.7 percent of the respondents in Bangarapet taluk reported that white discharge can be seen only among women and 64.5 percent reported that this is normal phenomenon among women, whereas the corresponding percentage for Malur were 64.0 percent and 72.5 percent, respectively. However, during endline survey, 98.0 percent of the respondents in Bangarapet reported that white discharge can be seen among both men and women and as much as 90.5 percent reported that this is not a normal phenomenon for women. While a persistent level of knowledge was found in Malur taluk. Similarly, the awareness level of white discharge abnormality increased in nearly 10% respondents of Bangarapet during end line survey, which was not at all aware during baseline survey. This clearly indicates the effectiveness of the intervention conducted in Bangarapet.

Table 2: Distribution of the respondents based on their Knowledge about RTI/STI.

Characteristics	Baseline		P value	Endline		P value
	Malur N=200	Bengarapet N=197		Malur N=197	Bengarapet N=204	
	%	%		%	%	
Awareness about any RTI/STI						
Yes	29.0	30.5	0.751	25.9	99.0	<0.01
Source of information about RTI/STI*						
Radio	17.2	25.0		33.3	21.3	
Television	33.3	51.7		66.0	75.2	
Cinema	21.1	25.0		44.0	2.0	
Newspapers/books/magazines	19.3	16.7		41.7	11.4	
Doctor	50.0	51.7		77.6	43.6	
Health workers	38.6	48.3		75.5	24.8	
Husband	22.8	23.3		14.6	5.0	
Relatives/friends	42.1	30.0		18.4	1.5	
IHMR training	0.0	0.0		0.0	90.1	
Others	0.0	0.0		25.5	4.5	
White discharge can be seen among						
Men only	0.5	1.0		2.6	1.5	
Women only	64.0	77.7	<0.01	75.0	0.5	<0.01
Both men and women	7.0	9.1		0.5	98.0	
Don't know	28.5	12.2		21.9	0.0	
White discharge normal among women						
Yes	72.5	64.5		72.6	11.3	
No	2.0	24.9	<0.01	6.1	88.7	<0.01
Don't know	25.5	10.7		21.3	0.0	

Note: *the proportion has been calculated out of those who have awareness about any RTI/STI

Table 3 shows the prevalence of RTI/STI among the respondents. In baseline survey nearly 17 percent of the respondents in Bangarapet reported that they had abnormal vaginal discharge during the last three months preceding the survey, while the corresponding proportion during end line survey was decreased to nearly 13 percent. The most common reported RTI/STI symptoms during both baseline as well as end line survey were pain

in lower abdomen not related to menses and low backache. As much as 25.9 percent respondents in Bangarapet and 16.5 percent respondents in Malur had reported any symptom of RTI/STI in last six months preceding the survey. This figure was found slightly increased (28.9%) during endline survey in Bangarpet, which may be due to increment in capability to identify the symptoms of RTI/STI which were taught during intervention workshops viz. itching or irritation, boils/ulcers/warts around vulva, pain in lower abdomen not related to menses, pain during urination or defecation, swelling in the groin, painful blister like lesions in and around vagina, low backache, pain during sexual activity, and spotting after sexual intercourse.

Table 3: Prevalence of RTI/STI among respondents.

Characteristics	Baseline			P value	Endline			P value
	Malur N=200	Bengarapet N=197	Total N=397		Malur N=197	Bengarapet N=204	Total N=401	
	%	%	%		%	%	%	
Any abnormal vaginal discharge (last three months)								
Yes	9.5	16.8	13.1	0.032	8.7	13.2	11.0	0.145
Had any symptoms of RTI/STI (last 6 months)								
Yes	16.5	25.9	21.2	0.022	14.9	28.9	21.9	0.001

Table 4 gives information about the treatment seeking behavior of SHG women for RTI/STI. About 63 percent of the respondents in Malur and 77.7 percent of the respondents in Bangarapet during baseline survey were aware that abnormal white discharge can be treated while the corresponding percentage during end line survey was 67.5 percent and 99.5 percent, respectively. It is to be noted here that through intervention 14.2 percent of respondents had improved their knowledge about treatment of abnormal vaginal discharge, who were not at all aware about any treatment modality for the same during baseline survey. During baseline survey there was no significant difference in Malur and Bangarpet taluk in health seeking behavior of respondents regarding RTI/STI. While a significant (P <0.01) improvement was observed in health seeking behavior of SHG women from Bangarpet taluk. This may be a reason for decrease in cases of abnormal vaginal discharge in intervention taluk (as shown in Table 3). Similarly, there was a significant (P <0.01) increment in the proportion of respondents who discussed with their husband about RTI/STI in Bangarapet during end line survey. In regard to the treatment received by partner (husband), it was interesting to found that during baseline survey only one fifth of the respondents in both Malur and Bangarapet reported that their partner was also receiving treatment for RTI/STI. After intervention, this figure was almost same for Malur, while it was found increased to more than 80 percent for Bangarpet taluk.

Table 4: Distribution of respondents according to treatment seeking behavior for RTI/STI.

Characteristics	Baseline		P value	End line		P value
	Malur N=200	Bengarapet N=197		Malur N=197	Bengarapet N=204	
	%	%		%	%	
Awareness about treatment of abnormal white discharge						
Can be treated	63.0	77.7		67.5	99.5	
Cannot be treated	14.5	8.1	0.006	10.2	0.5	<0.01
Don't know	22.5	14.2		22.3	0.0	
Seeking help for the problem*						
Yes	60.6	57.7	0.790	55.2	91.4	<0.01
Discussed with husband*						
Yes	66.7	53.8	0.242	55.2	91.4	<0.01
Whether husband also got treatment*						
Yes	21.2	19.2	0.824	17.2	81.0	<0.01

Note: * indicates that the proportion was calculated out of those who had any symptoms of RTI/STI in last 6 months

It was noted that in Bangarpet 12.5% of husbands' of respondents' believed on traditional healers for seeking treatment, this figure was reduced to 2% after intervention and they have shifted to either public or private health facilities for the treatment (Figure 1).

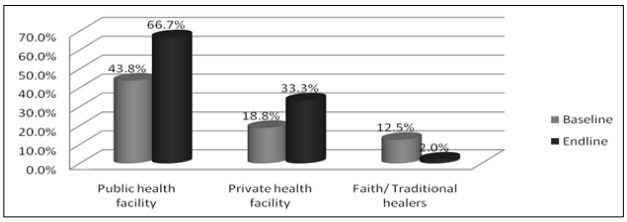

Figure 1: Place where husband got treatment in Bangarpet.**

**Indicates that the proportion was calculated out of those who reported their husband got treatment

DISCUSSION

Due to the stigma attached to the acquisition of reproductive and sexually transmitted infections these problems go unnoticed. In traditional rural settings area-specific health-communication approaches, which is the systematic attempt to positively influence the health practices of large populations need to be tested to influence reproductive health behaviour. The present study has attempted to empower and engage the SHG women by creating awareness and sustaining interest through specialty designed area specific IEC material for RTI/STIs.

In this study the awareness about RTI/STI was very poor compared to findings of Bhawsar RD et al (2005)[6]. However, other studies conducted within and outside India have also reported poor knowledge about RTI/STI among women.[7-12] The major sources of information on RTI/STI among respondents in the study area were doctors followed by interaction with health workers and Televisions. While the predominant sources of information for women in rural area of Ambala district of Haryana were Television followed by interactions with health workers and reading wall posters.[13] During baseline survey, around seven out of ten respondents reported that white discharge can be seen only among women and this is normal phenomenon among women,

In the present study nearly one out of five respondents had reported any symptom of RTI/STI in last six months preceding the survey which is supported by finding of various studies[6,14-16] regarding the period prevalence of RTI/STI in rural areas. Dissimilar findings were observed in the study of Bhandari MN et al. (2010)[17] and Balamurugan SS (2012)[18] as the prevalence of reproductive morbidity in their study sample was 57% and 40%, respectively. The finding of present study is again dissimilar to previous studies conducted in other parts of India[19-25] and other developing countries.[26] The most common reported RTI/STI symptoms in the present study during both baseline as well as end line survey were pain in lower abdomen not related to menses and low backache. Pain in lower abdomen was also reported as second most common symptoms by Singh A et al. (2012)[14] and Sharma S et al. (2009)[22] and third most common symptoms by Balamurugan SS et al. (2012).[18] The prevalence of RTIs/STIs in the present study was found slightly increased during endline survey in intervention Taluk, which may be due to increment in capability to identify the symptoms of RTI/STI which were taught during intervention workshops. Similar kind of increment in cases with symptoms of RTI has been reported during initial phase of intervention in the form of health education by Singh S (2010).[27]

Nearly seven out of ten respondents were aware about curability of RTIs/STIs, though one out of five did not know about the curability of these infections. Similar findings were observed by Bhawsar RD et al. (2005).[6] The important finding in this study is that nearly 60% women were seeking help for their problems which was very low compared to findings of Singh A et al. (2012)[14] but quite higher than the findings of various other studies.[17,28] Similar to other studies[14] the government health care facilities were found as most preferred place for seeking treatment of RTI/STI. The proportion of women seeking health care was found increased in intervention taluk after interventional efforts. Similar findings were reported by Singh S (2010).[27] The overall increment in knowledge score about RTIs/STIs has been documented by Aggarwal AK (2004)[13] through interventional efforts. In the present study only one fifth of the respondents reported that their partner was also receiving treatment for RTI/STI. This finding is supported by the findings of the study conducted by Hegde SK (2013)[7] which demonstrated that only 22% of the women knew that partner also needs to be treated in case of a RTI.

In summary, this study provides experience of the feasibility, efficacy and impact of health education interventions on the knowledge attitude and practices about RTI/STIs and treatment-seeking behaviour of SHG women in a rural setting of south India. This study will serve as a reference for researchers interested in the field of RTI/STI epidemiology, who may in future take up similar studies to compare and highlight the performance of Reproductive and child health (RCH) programme over the years in combating those problems. In view of the above results it is recommended that we need to have cost-effective strategies for prevention of STI/RTI, through information, education, and behavior change.

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