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Original Research Article

An Educational Intervention to Empower and Engage the SHG Women against Cervical Cancer

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ABSTRACT

Background: Cervical cancer is the fourth most common cancer among women worldwide. Control and prevention of cervical cancer largely depends upon the level of awareness of the diseases itself and available measures such as screening and vaccines.
Objective: The present study attempts to empower and engage SHG women on cervical cancer by creating awareness through Information Education and Communication (IEC) material so that they can act as change agents for other women in the community.
Methods: The study was 'Multi-centric Action Research Demonstration'. As an intervention, series of workshops were conducted with the help of pre-developed IEC material. In total, 400 households (200 from each intervention and control sites) of SHG women were interviewed for baseline and end line.
Results: The findings of the study revealed significant improvement in the level of awareness of SHG women about cervical cancer, its symptoms, preventability and curability aspects and places for screening in the intervention site as compared to control sites.
Conclusion: The study provides experience of the feasibility, efficacy and impact of health education interventions through information, education, and behaviour change for creating awareness about cervical cancer.

***Keywords*:** Cervical Cancer, Health education, IEC material, Self Help Group (SHG).

INTRODUCTION

Cervical cancer is the fourth most common cancer among women worldwide. [1] Its prevalence is high in low & middle income countries, low socio-economic groups within countries as well as among rural women. [2,3] In India, it is the second most frequent cancer among women next to breast cancer. It has been projected that the number of cervical cancer cases in India will be doubled by 2025. [4] In India; Visual Inspection with Acetic Acid (VIA) has been integrated in the national program for screening of cervical cancer at early stage, so that appropriate treatment measures can be taken to prevent its further progression and death. Nevertheless threat of cervical cancer is still haunting India, due to lack of awareness among the healthcare providers and the targeted population. [5] Today, India has the highest number of women dying from cervical cancer in the world and it is the third leading cause of cancer mortality after cancers of mouth and oesophagus, accounting for nearly 10% of all cancer related deaths in the country. [6]

Control and prevention of cervical cancer largely depends upon the level of awareness of the diseases itself and available measures such as screening and

vaccines. Many studies have documented low level of awareness and knowledge about cervical cancer in the country. [7-15] Health education can be a powerful tool to increase awareness in the community, but sustained behavioural change through education is a long-drawn process and needs a culturally tailored intervention in the delivery of health education. Use of Information, Education and Communication (IEC) material in delivering health education along with active participation by the community ensures delivery of appropriate information to people which in turn empowers them to make informed decisions about their health. The local Health care workers in rural areas are the part of the existing health system and act as change agents in India. They are expected to be the part of the health system and village for life long. So, the investment in their training and in turn communication of the acceptable information to the community may be a cost effective intervention strategy in long run. Wechsberg WM et al., (2004) [16] has suggested that the empowerment-based interventions tailored to develop concrete solutions within personal social contexts, more than standard interventions, can influence other life changes and facilitate independence among women. [16]

Self-help groups (SHGs) women are seen as instruments for empowering women in the community. Realizing this, it was hypothesized that if the strategy to train SHG women brings significant improvement in the knowledge of study population; then this strategy may be a financially sustainable and practicable method for creating awareness about cervical cancer in rural India. So, this research work with a specially designed educational intervention was formulated with the following objective: *To empower and engage the SHG women against cervical cancer by creating awareness through IEC.*

MATERIALS AND METHODS

The data used for this article is based on original study: 'Multi-centric Action Research Demonstration Study'. The study intend to sensitize, mobilize and engage SHG women as change agents to generate awareness among village women on reproductive health, including cervical cancer, and to ensure behavioural change towards hygiene in the community. The study was carried out for one and half year (from May 2012 to October 2013). In the initial first three months (preparatory phase) the following activities was carried out: extensive literature search, designing and finalization of interview schedules, baseline data collection in the form of Household Surveys (HHS) and Focused Group Discussions (FGDs) and development of IEC material. Next one year was intervention phase where a series of workshops were conducted with the help of pre-developed IEC material to increase the awareness of SHGs members regarding reproductive health. Last three months were utilized for end line survey by means of HHs and FGDs, data analysis and report writing.

Overall this multi-centric study was spread over in five districts in 3 states namely Karnataka, Rajasthan and Chattisgarh. Kolar district in Karnataka was the primary intervention site. Out of eleven taluks of Kolar district, one intervention taluk (Bangarpet) was selected by using 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 fifteen workshops, each consisting three days, targeting 75 SHGs were conducted in Bangarpet taluk. Sensitization was carried out 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 two workshops, each consisting three days, were conducted. This study consists of only quantitative data analysis of intervention district of Karnataka.

Sample size: As per the literature search and by assuming the minimum prevalence (50%) for awareness about cervical cancer among SHG women and considering 10% permissible level of error in the estimated prevalence, the sample size was calculated using the formula $n = z^2pq/L^2$ where z= 1.96, n= Sample size, p= Assumed prevalence (50 % in this study), q= 100-p and L= permissible level of error in the estimated prevalence, taken as 10% (10% of 50 = 5). Thus the total sample size was "$n= (1.96)^2*50*50 / (5)^2 = 384.16$". 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 end line each.

Selection of Households: There are 3 Community Mobilization 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 using simple random sampling. Thus, total 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 proportionate to size (PPS) sampling technique. In order to get required study subjects, simple random sampling was done.

Statistical analysis: The analysis was done in SPSS v16.0. The statistical significance was computed using chi-square test for proportions and p value of <0.05 and <0.01 were taken as significant and highly significant, respectively.

Ethical approval: This study was approved by the ethical review committee of Karnataka Institute of Medical Sciences (KIMS), Hubli, Karnataka.

RESULTS

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				
Currently 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 cards

Socio-economic and demographic characteristics of the respondents

Socio-economic and demographic characteristics of the respondents during baseline and end line surveys is illustrated in Table 1. A total of 397 and 401 households were covered during baseline and endline survey, respectively. The mean age of the sample SHG women during baseline survey and end line survey were 31.4 years (SD=6.7) and 32.7 years (SD=7.3), respectively. Majority (more than 95% in both baseline and endline) of the respondents in the study area were currently married. Predominately, nuclear families were found in the study area. A vast majority of the respondents were Hindus in both the taluks and hailed from different caste groups such as Scheduled caste & Scheduled Tribes (more than 35 percent) and from other backward Caste (OBCs) (27 % in baseline & 29 % in end line). More than 90 percent of the respondents have a ration card and out of them majority were belonging to Below Poverty Line (BPL) or extremely BPL category. It is evident from Table 1 that all the socio-demographic variables were matching in intervention and control taluks, both during baseline and endline.

Table 2: Distribution of Respondent according to their awareness on Cervical Cancer

Characteristics	Baseline			p value	Endline		p value
	Malur	Bengarapet	Total		Malur	Bengarapet	
	N (%)	N (%)	N (%)		N (%)	N (%)	
Heard of cervical cancer							
Yes	55 (27.5)	98 (49.7)	153 (38.5)	<0.01	45 (22.8)	200 (98.0)	<0.01
Aware about any symptom of cervical cancer*							
Yes	32 (58.2)	84 (85.7)	116 (75.8)	<0.01	39 (86.7)	200 (100.0)	<0.01
Awareness about various symptoms of cervical cancer**							
Abdominal Pain	21 (65.6)	72 (85.7)	93 (80.2)		39 (100)	193 (96.5)	
Pain During Sexual Intercourse	9 (28.1)	43 (51.2)	52 (44.8)		19 (48.7)	24 (12.0)	
Abnormal Vaginal Bleeding	15 (46.9)	62 (73.8)	77 (66.4)		28 (71.8)	183 (91.5)	
Vaginal Discharge	15 (46.9)	49 (58.3)	64 (55.2)		29 (74.4)	104 (52.0)	
Is cervical cancer life-threatening or lethal?*							
Yes	35 (63.6)	94 (95.9)	129 (84.3)		29 (64.4)	200 (100.0)	
No	3 (5.5)	1 (1.0)	4 (2.6)		9 (20.0)	0 (0.0)	
Don't know	17 (30.9)	3 (3.1)	20 (13.1)		7 (15.6)	0 (0.0)	
Awareness on whether cervical cancer is curable*							
Curable	27 (49.1)	89 (90.8)	116 (75.8)		38 (84.4)	199 (99.5)	
Not curable	9 (16.4)	7 (7.1)	16 (10.5)		5 (11.1)	1 (0.5)	
Don't know	19 (34.5)	2 (2.0)	21 (13.7)		2 (4.4)	0 (0.0)	
Awareness about prevention of cervical cancer*							
Preventable	30 (54.5)	91 (92.9)	121 (79.1)		41 (91.1)	200 (100.0)	
Not preventable	4 (7.3)	4 (4.1)	8 (5.2)		1 (2.2)	0 (0.0)	
Don't know	21 (38.2)	3 (3.1)	24 (15.7)		3 (6.7)	0 (0.0)	
Aware about any place to get screened for cervical cancer*							
Yes	37 (67.3)	98 (100.0)	135 (88.2)		43 (95.6)	200 (100.0)	
Awareness about various places to get screened for cervical cancer***							
Public health facility	26 (70.3)	89 (90.8)	115 (85.2)		31 (72.1)	198 (99.0)	
Private Health facility	12 (32.4)	52 (53.1)	64 (47.4)		14 (32.6)	180 (90.0)	
Traditional/Faith Healer	0 (0.0)	9 (9.2)	9 (6.7)		0 (0.0)	0 (0.0)	

Note: *The proportion has been calculated out of those who have heard about cervical cancer, **the proportion has been calculated out of those who were aware about any symptom of cervical cancer, *** the proportion has been calculated out of those who were aware about any place to get screened for cervical cancer

Awareness about cervical cancer

Although, government and various NGOs working in the study sites had taken efforts in creating awareness about cervical cancer since a long time, during baseline survey it was evident that only 38 percent of SHG women (49.7 % in intervention taluk and 27.5 % in control taluk) reported that they have ever heard about cervical cancer (Table 2). Out of those who have heard about cervical cancer, only three fourth (76 %) were aware about symptom of cervical cancer and this awareness was significantly ($p < 0.01$) higher in Bangarpet taluk (86 %) compared to Malur taluk (58 %). Thus, intervention had resulted in increase in awareness about cervical cancer among predominant (98 %) number of SHG women in the intervention taluk. Similarly, educational intervention had also resulted in significant improvements in their awareness level about various symptom of cervical

cancer like abdominal pain, abnormal vaginal bleeding, vaginal discharge and pain during sexual intercourse. Nevertheless, further efforts are needed to improve the knowledge in this regard.

Majority (96%) of the SHG women in Bangarpet taluk and nearly two third in Malur taluk considered cervical cancer as a lethal disease. On other hand, nearly 15 percent of the respondents were either not aware or were not considering cervical cancer as life threatening condition. Intervention was successful in changing the wrong perception of the respondents, which is crucial to change the mindset in the direction of prevention efforts and treatment seeking behaviour of the community. Considering the selection of nearby taluk as control to match the socio-demographic milieu and longevity of intervention (one year), knowledge diffusion was observed in control taluk in the form of improvement in awareness about preventive and curative aspect of cervical cancer and rise in awareness on this regard was convincing in both Malur and Bangarapet taluk. During awareness creating workshops, SHGs were also educated about screening places for cervical cancer, and this effect reflected during end line assessment. Notably, 9 percent of the women in the intervention taluk replied that traditional healers can be visited for cervical screening. This wrong faith could be changed by creating awareness among the women.

DISCUSSION

The study highlights low level of knowledge about cervical cancer among SHG women before intervention. During baseline only around four out of ten SHG women were aware about cervical cancer and out of those, only three-fourth was aware about symptom of cervical cancer. This level of knowledge is very low when compared with findings of many other studies, [17-22] but is in accordance with the findings of the study conducted by Ebu N *et al* (2014). [23] Majority (80%) of the SHG women in the present study believed that cervical cancer can be prevented. This finding is similar to the studies conducted by Anantharaman VV et al (2016) [17] and Naik PR et al (2012). [20]

With the help of planned intervention almost all (98 %) the SHG women became aware about cervical cancer in the intervention taluk. Besides, there were significant improvements in their awareness level about the various symptoms of cervical cancer, knowledge regarding preventability and curability aspect of cervical cancer and place for screening. This kind of overall increase in knowledge about cervical cancer through educational intervention has been documented by other studies as well. [20,24] Nonetheless, strenuous efforts are critical to improve the knowledge on cervical cancer among women. Since this may increase the detection of disease at earlier stages and take preventive measures and thereby increase the rate of survival. Studies conducted in different setting in India on cervical cancer also emphasised the need to educate about cervical cancer and motivate them to participate in cervical cancer screening program. [9,10,12,14,21]

CONCLUSION

In conclusion, 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. Creating wide and effective awareness about cervical cancer through culturally tailored methods is vital and this must be an integral part of public health policy of government. Besides, the study highlights the need to undertake similar community based multi-centric studies about awareness and education interventions.

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Authors' note

The study was conceptualized and its design formulated by MKG and FV. Literature search and data collection were done by SR, MKG and FV. Analysis and interpretation of data were done by SR and MKG. Drafting of the article was done by SR and MKG. The manuscript was critically reviewed by FV. SR takes the responsibility for the integrity of the work as a whole from inception to publishing of the article and may be designated as "guarantor" or key person for the study.

Declaration of conflicting Interests

The author (s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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