International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Naik DD et al. Int J Reprod Contracept Obstet Gynecol. 2018 Jan;7(1):178-184
www.ijrcog.org

pISSN 2320-1770 | eISSN 2320-1789

DOI: http://dx.doi.org/10.18203/2320-1770.ijrcog20175842

Original Research Article

Enhancing awareness of STIs and cervical cancer among husbands in an urban slum of Mumbai, India: a comparative study focusing on General, OBC and SC/ST/NT population

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Received: 30 October 2017
Accepted: 25 November 2017

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ABSTRACT

Background: Globally, cervical cancer is one of the most common cancers among women, 80 percent of cervical cancer cases present with an advanced stage of the disease when cure is impossible. This may be due to lack of awareness and knowledge, and lack of access to proper treatment including screening facility. Involvement of husband for understanding and supporting the wife may be more effective in reproductive health related matters.
Methods: An intervention study was undertaken in an urban slum of Mumbai with the objectives to investigate the awareness, knowledge and perceptions about STIs and cervical cancer and to identify programme strategies contributing to effective participation of husbands in three different categories. Baseline data was obtained from 1020 married men followed by interventions for 18 months and endline data was collected from 1013 married men to evaluate the impact of intervention. Descriptive statistics and Chi-square test was used for data analysis.
Results: The results indicate significant increase in awareness about STIs, cervical cancer and Pap smear with low awareness about symptoms, abnormal discharge from vagina and abnormal vaginal bleeding in all the three groups.
Conclusions: Study concludes that intervention strategy adopted at community as well as clinic level can play better role as a source of information of STIs and cervical cancer. Similar changes observed in all three categories suggest, programmes need to focus on general population rather than specific categories in a metropolitan city like Mumbai as population in urban slums of Mumbai is ethnically mixed in nature.

Keywords: Awareness, Cervical cancer, Intervention strategy

INTRODUCTION

Cervical cancer is the second most common cancer among women, with globally estimated more than 5,30,000 new cases every year and more than 2,70,000 women die due to this disease. Most of these deaths are in low- and middle-income countries.[1] The International Agency for Research on Cancer (IARC) estimated around 1,34,400 new cases and 72,825 deaths due to cervical cancer in India.[2] Current estimates indicates 1,22,844 new cases and 67,477 deaths annually due to cervical cancer in India.[3]

This may be due to lack of awareness and knowledge, lack of access to proper treatment including screening facility. There is lack of information in the scientific literature regarding men's knowledge, attitudes, and beliefs about cervical cancer and the roles that they may play in cervical cancer prevention[4]. Studies on knowledge of men about cervical cancer and Pap smear screening

test for cervical cancer indicated low awareness among men.[5-7]

Successful treatment depends on early diagnosis of cervical cancer.[8] Pap smear screening for the early detection of pre-cancerous lesions is the cost-effective and well-established technique currently available and used all globally. It also has additional benefit in detecting some of the common sexually transmitted infections in single smear.[9] Pap smear test has resulted in a significant reduction in the mortality due to cervical cancer which is the leading cancer related cause of death among women worldwide. Although there are many techniques available and each technique have its own advantages and disadvantages. Women are less likely to be screened when they do not understand the importance of recommendations.[10] Adding on to this the reason that cervical cancer is often linked with sexually transmitted infections and sexual relationship outside the marriage. Psychological barriers, including the lack of spousal support, can impede a woman's access to cervical cancer screening.[11-13]

There is a general consensus that the health status of the scheduled castes population is very poor.[14] Rejoice et al, observed low awareness levels of RTI/STI among young married scheduled castes women in their study conducted in Tamilnadu State in India.[15] Awareness of RTI/STI was observed lower among women in Kerala from Scheduled Caste.[16] In a study conducted on gynaecological morbidity in Orissa, Nanda et al, observed that one out of five scheduled caste and one out of four scheduled tribe women having gynecological problem.[17] Study conducted by Saslow et al, indicates that half of the women diagnosed with cervical cancer have never undergone a Pap test.[18] Lack of access to proper treatment including screening facility, lack of awareness of the benefits of the screening test, considering oneself not at risk, fear of getting diagnosed as cancer and embarrassment were the reasons observed for seeking health care in advanced stage of cervical cancer in India.[19,20] Few papers also raise the issue of disparity in knowledge and awareness among various categories of population based on religion and caste. However, studies also suggest this may be subject to regional variations in a multicultural state like India.[15,16,21] A study conducted in southern part of the country among tribal population revealed that most of the respondents had not heard of STIs, and of those who had, only one percent was aware of associated symptoms.[22] The awareness varied from state to state as one study in Maharashtra showed that 49 percent of men and 59 percent of women were aware of STIs.[23] In a study conducted in urban slums of Mumbai, awareness about STI was observed less among SC/ST/minority men as compared to Hindus.[24] Another study conducted among husbands in urban slums of Mumbai concludes that the need to disseminate knowledge regarding STI symptoms, cervical cancer and pap smear test for early detection of cervical cancer.[7]

Although it is not possible to launch nationwide cytological-Pap smear screening programmes for cervical cancer in developing countries because of other compelling problems like lack of awareness and fear of screening procedure. The alternative strategy such as involvement of male partners for understanding and supporting the women may be more effective. Number of studies on reproductive health in developing countries has suggested that involving men in reproductive health improves health outcomes.[12,25-27] Since husbands are the decision makers in health care of wives, their positive emotional support can encourage wives for early diagnosis of cervical cancer.[28,29] In this regard, the current paper tries to investigate the awareness, knowledge and perceptions about STIs and cervical cancer and to identify programme strategies contributing to effective participation of husbands in different categories.

METHODS

The data of intervention area is drawn for this paper from a three year (2010-2013) intervention study entitled "Enhancing knowledge and promoting health seeking behaviour of couples on sexually transmitted infections and cervical cancer in urban slums of Mumbai". Baseline, intervention process reports and endline survey data is used for the purpose of understanding the objective of this paper. Baseline data was obtained from random sample of 1020 married men with wife's age between 15-49 years through a semi-structured interview schedule during 2010. Based on baseline survey data, an interventional strategy was designed and implemented at community as well as clinic level through providing information, education, counselling and clinic services for men and their spouses. Post-intervention data was collected from 1013 married men during 2012. Area selected for the study was catered by health post under vicinity of Municipal Corporation of Greater Mumbai (MCGM), situated in Dr. Babasaheb Ambedkar Maternity Home, Vikhroli, Mumbai, Maharashtra.

The data was collected by conducting personal (face to face) interview by male social staff in privacy, through a pre-designed semi-structured interview schedule after obtaining informed consent from respondents. The interview schedule was consisting of open ended as well as close-ended questions in vernacular languages; Marathi and Hindi. The interviews were conducted at participant's house or convenient place where they feel comfortable to answer the questions and at their convenient time with their consent. The subjects were explained the objectives of the study and assured their confidentiality in the language they understand. Those who did not wish to participate in the study were excluded from the study. Informed consent was obtained from participants before enrolling in the study. The information was collected on socio-economic and demographic status, awareness of cervical cancer and sexually transmitted infections (STIs), experience of symptoms, and sexual and reproductive health seeking

behaviour. This data was further classified into three categories namely; General, Other Backward Class (OBC) and third category is the combination of Schedule Caste, Schedule Tribe and Nomadic Tribe (i.e SC/ST/NT). Descriptive statistics and Chi-square test was used for data analysis.

Intervention strategies

In continuation of the baseline information collected and issues identified in the community, various intervention strategies were carried out for 18 months, to enhance the knowledge and promote health seeking behaviour of couples on sexually transmitted infections (STIs) and Cervical Cancer. Help of local community leaders, community volunteers, local cultural and social groups, anganwadi teachers and assistants were taken during organizing IEC (information education and counselling) programmes. Project team visited general physicians and local mandals/ NGOs to solicit their co-operation in achieving the goal of the study. IEC material had been developed in locally accepted languages (Marathi and Hindi) on; RTIs/STIs and cervical cancer, their symptoms, causes, prevention and test for early detection of cervical cancer, after review of existing IEC material. The strategies included providing; information, education, communication and counselling through inter-personal communication (IPC), smaller group meetings, educational programmes and street plays at the community level and reproductive health services for couples at maternity home. Most of the community level programmes were conducted during Sundays, holidays and evening time to cover maximum male population for intervention. Pap smear camps were organized once in a month at maternity home. Men/ women/ couples with reproductive and sexual health problems were referred to maternity home for further management and treatment.

About 14000 men were contacted personally by the team of social workers and they were provided information on STIs and cervical cancer. Eleven educational programmes were conducted by using flip charts and overhead projector with transparencies, containing information regarding STIs and cervical cancer including Pap smear test; 285 men attended these programmes, 1479 smaller group meetings were conducted to provide information on RTIs/STIs and cervical cancer using flip charts; about 11000 men attended these meetings. Eight street plays each on cervical cancer and RTIs/STIs organized in the community to cover large population. In addition to this one street play on cervical cancer was organized in a school with one of the medical camp in the community. Overall about 1200 men attended these street plays.

At clinic level, services for STIs were provided to the couples along with Pap smear screening camp once in a month for diagnosis of STIs and cervical cancer at Dr. Babasaheb Ambedkar Maternity Home, Vikhroli by Municipal Corporation of Greater Mumbai (MCGM) and were supported by the staff from the ICMR-National Institute for Research in Reproductive Health. Collection of cervical smears was carried out by ANM/PHN under the supervision of Gynecologist. Smears were processed for Pap test by the technicians and reporting was done by the pathologists from Rajawadi Municipal Hospital under the technical guidance of cytologist from ICMR-NIRRH. During April 2011 to March 2013, 24 Pap smear camps were organized, in which 758 women had undergone Pap smear tests.

Orientation programmes

As a part of intervention, two orientation programmes were organized during intervention phase for medical and para-medical staff, and community health volunteers (CHVs) of maternity home/ health post in study area. Two doctors, 2 technicians, 5 ANM/PHN, 25 CHVs and 5 supportive staff of the maternity home/ health post attended these programmes. Apart from these, an intervention programme was organized for local general medical practitioners of the intervention area for which 12 doctors out of 85 contacted were attended. Topics covered in the first part of this orientation programme were magnitude of cervical cancer, factors associated with development of cervical cancer, population at risk, test for detection of cervical cancer, procedure of taking cervical smears for Pap test and information about referral centers in case of any positive case is detected. In second part of the programme; importance of inter-spouse communication and role of private medical practitioner was discussed.

Contact visits and distribution of reading material

In order to build rapport with the community and getting references for Pap smear camps; 1155 visits were made to contact Private General Medical Practitioner in the community and 1492 visits were made to Local Community Leaders. Information regarding Pap smear test, its advantages and Pap smear camps (which had been organized on 4th Thursday of every month at Dr. Babasaheb Ambedkar Memorial Maternity Home) was provided through distribution of about 3000 pamphlets. In addition to this, about 8000 pamphlets each containing information on STIs and cervical cancer in local languages Marathi and Hindi were distributed to create awareness.

RESULTS

Socio-demographic characteristics of the respondents

The category wise distribution of respondents during baseline survey was; 695 (68.1%) husbands belonged to general category, 131 (12.8%) belonged to OBC and 194 (19%) belonged to SC/ST/NT category. Whereas during post intervention survey it was; 645 (63.7%) husbands were belong to general category, 169 (16.7%) were belong to OBC and 199 (19.6%) were belong to SC/ST/NT category.

Table 1: Selected socio-demographic characteristic of respondents: Mean±SD.

Characteristics	General		OBC		SC/ST/NT	
	Baseline (N=695)	Post intervention (N=645)	Baseline (N=131)	Post intervention (N=169)	Baseline (N=194)	Post intervention (N=199)
Current age (Yrs)	38.64 (±8.39)	39.83 (±7.79)	38.00 (±8.26)	39.90 (±8.40)	32.81 (±7.95)	39.29 (±8.39)
Age at marriage (Yrs)	24.27 (±3.86)	24.30 (±3.80)	24.11 (±4.10)	23.69 (±3.96)	18.51 (±3.07)	24.32 (±3.70)
Number of schooling years	9.41 (±3.50)	9.96 (±3.07)	9.82 (±3.42)	10.15 (±3.37)	6.95 (±4.29)	9.50 (±3.47)
Family Income (Rs) per month	7978 (±5543)	9305 (±4550)	8263 (±8293)	9289 (±4468)	8191 (±9045)	8446 (±4846)
No. of living children	2.21 (±1.26)	2.19 (±1.13)	2.16 (±1.27)	2.08 (±1.11)	2.25 (±1.35)	2.22 (±1.08)

Table 2: Socio-demographic characteristic of respondents: occupation of respondents.

Occupation	General		OBC		SC/ST/NT	
	Baseline (N=695)	Post intervention (N=645)	Baseline (N=131)	Post intervention (N=169)	Baseline (N=194)	Post intervention (N=199)
White collar	15.5	11.9	14.5	18.3	15.5	11.1
Technical/ skilled	30.4	27.9	30.5	24.3	23.2	28.1
Semi-skilled/ unskilled	33.5	41.1	36.6	37.9	50.5	49.2
Business	20.6	19.1	18.3	19.5	10.8	11.6
Significant level	p=0.024		p=0.61		p=0.48	

Table 1 presents the selected socio-demographic characteristics of the respondents. There was no much difference observed between General and OBC categories in terms of age, age at marriage, education, family income and number of living children of respondents during baseline and post intervention survey. Comparing to these two groups; age, age at marriage and education was observed less among SC/ST/NT category during baseline survey.

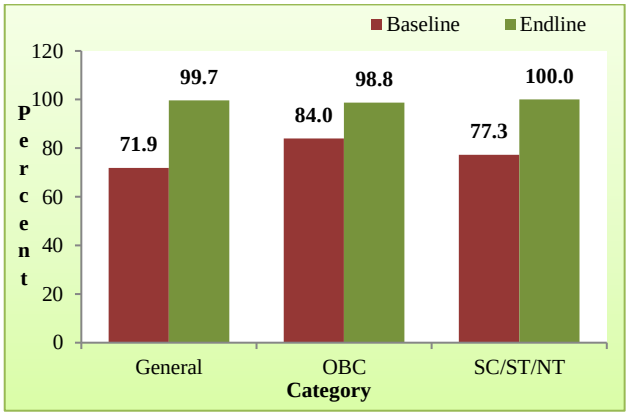
Mean number of living children from all three groups was little more than two during baseline as well as post intervention survey (Table 1). Majority of respondents from all the three categories were working on semi-skilled/unskilled jobs followed by technical/skilled jobs during baseline as well as post intervention survey (Table 2).

Awareness about symptoms of STIs

Significant (p<0.001) increase was observed in awareness about sexually transmitted infections (STIs) in all three groups after interventions.

Category wise it was increased from 71.9 percent to 99.7 percent among general category, 84 percent to 98.8 percent among OBC category and from77.3 percent to 100 percent among SC/ST/NT category respectively (Figure 1).

Comparing all three groups there was significant (p<0.01) difference observed during baseline survey whereas no significant (p<0.167) difference observed after intervention in awareness about STIs.



P<0.001

Figure 1: Awareness about sexually transmitted infections.

Regarding symptom of STIs significant (p<0.001) increase was observed in awareness about all symptoms with less increase in awareness about abnormal vaginal bleeding and abnormal discharge from vagina in all three groups (Table 3).

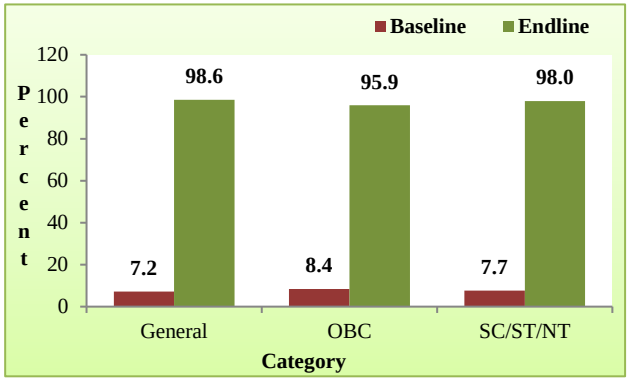
Table 3: Percentage distribution of awareness about STI symptoms by category.

RTI/STI symptoms	General		OBC		SC/ST/NT	
	Baseline	Post intervention	Baseline	Post intervention	Baseline	Post intervention
Pain during intercourse	65.5	98.9***	80.2	98.8***	60.0	100.0***
Itching/redness in/around genital area	63.3	93.3***	77.9	92.3***	68.0	90.5***
Increased frequency of urination	58.7	97.8***	72.5	98.2***	60.8	98.0***
Burning sensation during urination	58.7	98.8***	71.0	97.0***	59.3	99.5***
Genital Lesion (sores/ulcers/warts)	58.3	99.4***	67.2	97.6***	60.8	99.5***
Genital discharge in men	4.3	98.8***	3.1	98.2***	6.7	98.5***
Lower abdominal pain	2.7	98.1***	2.3	97.6***	2.6	98.5***
Abnormal discharge from vagina	2.4	27.6***	2.3	29.0***	2.5	29.1***
Abnormal vaginal bleeding	0.3	31.5***	1.5	33.7***	0.0	31.2***

P<0.001 = ***

Awareness about cervical cancer and Pap smear test

Awareness about cervical cancer reached to 98.6 percent in general category, 95.9 percent in OBC category and 98 percent in SC/ST/OBC category with significant (p<0.001) increase (Figure 2). Comparing all three groups there was no significant (p=0.879) difference observed during baseline as well as post intervention (p=0.073) survey with respect to awareness about cervical cancer. Similar findings were observed about awareness of pap smear test.



P<0.001

Figure 2: Awareness about cervical cancer.

DISCUSSION

The present study indicates about 7 percent husbands from general category, 8.4 percent from OBC and 7.7 percent from SC/ST/NT were aware of cervical cancer during baseline survey. This had been increased to 98.6 percent among husbands in general category, 95.9 percent in OBC and 98 percent in SC/ST/NT after intervention. Similarly, in a study conducted among Nigerian women depicted significant increase in knowledge of cervical cancer from baseline (15%) to endline survey (61.7%) through community based education messages.[30] Similar findings were observed in our study conducted among women in an urban slum community in Mumbai. There was increase in awareness among all the categories after intervention.[31] These studies shows relatively higher awareness of cervical cancer when compared to other studies conducted a hospital based study among women attending Department of Obstetrics and Gynaecology, Kolkata showed that awareness of cervical cancer was 16 percent.[32] In another study carried out among female students of Delhi and Mangalore revealed that 66 percent female students were aware of cervical cancer.[33] The present study showed that 7.2 percent husbands from general category, 8.4 percent from OBC and 7.7 from SC/ST/NT have heard about Pap smear test during baseline survey. This increased to 98.6 percent among women in general category, 95.9 percent in OBC and 98 percent in SC/ST/NT after intervention. In other study, 11 percent of the female college students aged 17-24 years and 5% women had heard of the Pap smear test.[32,34]

Most of the studies on awareness of cervical cancer are among women and are hospital based whereas current study is carried out in the community to investigate the awareness, knowledge and perceptions of STIs and cervical cancer; and identify programme strategies contributing to effective participation of husbands in different categories. Promotion and education is needed to prevent incidence of cervical cancer.[35] Present study showed that the awareness of cervical cancer and Pap smear increased significantly with interventions such as inter-personal communication, smaller group meetings, education programmes and street plays. Similar findings were observed in our study conducted among women in an urban slum community in Mumbai.[31] Baseline results indicate low awareness of cervical cancer and Pap smear test among husbands. Significant (p<0.001) increase was observed in awareness about, STIs, cervical cancer and Pap smear test in all three categories after intervention. Awareness about different symptoms of STIs among respondents increased significantly (p<0.001). Comparatively low increase was observed in awareness

about abnormal vaginal bleeding and abnormal discharge from vagina in all three groups.

CONCLUSION

The study concludes that intervention strategy which includes inter-personal communication, reading material, smaller group meetings and street plays at community level whereas Pap smear camps and clinic services at health post level can play a vital role as a source of information of STIs and cervical cancer. Intervention strategies showed similar changes in all three categories. This implies that there is no need to have separate programmes for socially excluded group in population like urban slums of Mumbai. This could be because of ethnicity of Mumbai. Mumbai has ethnically mixed population in nature.

ACKNOWLEDGMENTS

Authors would like to acknowledge the funding support received from the Indian Council of Medical Research, New Delhi, India. The authors also thank to Mr. Umesh Iddya, Dr. Saritha Nair, Dr. Vaishali Chandanashive, (MO and Gynecologist) and other medical and paramedical staff of Vikhroli Maternity Home, Municipal Corporation of Greater Mumbai (MCGM) and the project staff namely; Mr. Anil Raut, Ms. Kavita Juneja, Mr. Nitin Kamble, Ms. Jayshree Chimankar, Ms. Virangana Pawar and Dr. B.N. Mali for their support towards the conduct of the study.

Funding: Indian Council of Medical Research, New Delhi, India
Conflict of interest: None declared
Ethical approval: The study was approved by the NIRRH Ethics committee for clinical studies, (ICMR), Mumbai

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Cite this article as: Naik DD, Donta B. Enhancing awareness of STIs and cervical cancer among husbands in an urban slum of Mumbai, India: a comparative study focusing on General, OBC and SC/ST/NT population. Int J Reprod Contracept Obstet Gynecol 2018;7:178-84.