Factors Associated with Attitudes of Rural Women Toward Cervical Cancer Screening

Sir,

Cervical cancer is the leading cancer among women in India. The irony is that this disease is preventable if detected early. In low resource settings such as India implementation of universal screening is still not possible due to lack of trained manpower and resources. Some well tested screening methods are cervical cytology, aided visual inspection of the cervix and human papilloma-virus tests. For successful implementation of community based cervical cancer screening programs, prior-understanding of the attitude of women in the target community is required. Success of the screening program primarily depends on screening uptake or high level of screening attendance. Good attendance of women at screening clinic is essential to obtain a good coverage of screening of the target population. This is generally associated with knowledge and attitude of the community toward screening. Evaluation of factors related to attitudes of women in the community would help in removing the barriers for screening. Data related to determinants of participation of women in cervical cancer screening is limited especially in India[1,2] though there are several studies in the other parts of the world. The present study attempts to evaluate the factors associated to attitudes in rural women toward cervical cancer screening.

A cross-sectional study was conducted during February-April 2009 in a rural area of Dadri Tehsil in Uttar Pradesh. For an expected frequency of 40% of cervical cancer awareness in the community with 5% absolute allowable error, 95% confidence level and an anticipated 20% non-response level a sample size of 434 was found adequate. A two stage random sampling method was adopted in the study. In the first stage, 10 villages were selected from a total of 36 villages by simple random sampling. An average of 50 households was selected from each of the 10 villages by systematic sampling. A sample of 511 women of age 25-60 years were interviewed from the selected households using a pre-designed and pretested questionnaire containing questions related to attitude of women for responding to screening in the community. Questions on attitudes to screening as adopted from a sample of questions to assess community perspectives from an International Agency for Research on Cancer publication and tailored to our need[3] are shown in the first column of Table 1. The present baseline survey on attitudes was approved by the ethical committee of our institution. The women in the community and the village heads were informed about the study and a verbal consent of each woman was obtained before administering the questionnaire. Data were analyzed using the statistical software Statistical Package for the Social Sciences, version 16.0 (SPSS Inc, Chicago). Tests of significance were evaluated by Chi-square test at 5% level of significance.

The mean (standard deviation) age of women interviewed was 37.7 (10.2) years. 72% of the total women were aware of the cervical cancer and had knowledge of treatment possibility. The association of various factors related to attitudes of rural women toward cervical screening is shown in Table 1. Of the women interviewed, 86.9% expressed that their husbands would permit them to go for screening. Factors such as a woman of young age and house wives were significantly associated with the role of husbands in permitting their wives to undergo pelvic examination. Responses on agreeing for (a) the test, (b) husbands permitting their wives and (c) screening at Government hospital are high (70-95.6%) irrespective of the religion they belong. Higher proportion (60.0%) of Hindu women expressed that the screening clinic timings would be suitable.

Regarding the place of screening center, significant proportion of house wives and literate women were comfortable to go to the Government health facility for cervical screening. Overall, a very high percent (93-98.2%) of community women were comfortable to avail such facility if arranged at Government health center. Though there is a tendency in a part of the community to take treatment in private hospitals as against Government center (54.0% vs. 35.0%) for other illnesses and obstetric care (data not shown in Table 1), but they agreed to avail screening facilities proposed at primary health center and sub-center. Occupation of woman as house wife is associated ($P < 0.05$) with visiting Government hospital (97.5%), clinic time suitable (63.1%) and agree to under-go pelvic examination (94.8%) for cervical cancer prevention.

More ($P < 0.01$) literate women had the experience of previous speculum examination for reasons other than cervical screening. Women with previous such experience were comfortable during that examination; they also did not feel pain or embarrassment during the procedure. Experience of a pelvic exam earlier was associated with factors of young age, literacy status of both woman and her husband and occupation of the women. In the opinion of women interviewed on the willingness of other women in the community for

Table 1: Association of attitudes of rural women toward cervical screening in relation to various factors

Factors	Age group		Religion		Woman's education		Husband's education		Woman's occupation	
Response of woman	Younger (*n*=311)	Older (*n*=200)	Hindu (*n*=406)	Muslim (*n*=105)	Illiterate (*n*=232)	Literate (*n*=276)	Illiterate (*n*=40)	Literate (*n*=461)	House wife (*n*=366)	Working (*n*=142)
Had a previous pelvic/speculum exam (yes)	114* (36.7)	54 (27.0)	140 (34.5)	28 (26.7)	50 (21.6)	110** (39.9)	6 (15.0)	160* (34.7)	109 (29.8)	59* (41.5)
Feel about pelvic/ speculum exam (comfortable)	97 (31.2)	48 (24.0)	121 (29.8)	24 (22.9)	53 (22.8)	92 (33.3)	5 (12.5)	138 (29.9)	93 (25.4)	52 (36.6)
Purpose to undergo exam (gynecological problem)	77 (24.8)	42 (21.0)	95 (23.3)	24 (22.9)	43 (18.5)	76 (27.5)	3 (7.5)	115 (24.9)	83 (22.7)	36* (25.4)
Under-go pelvic exam for cervical cancer prevention (agree)	290 (93.2)	183 (91.5)	379 (93.3)	94 (89.5)	212 (91.4)	259 (93.8)	37 (92.5)	429 (93.1)	347* (94.8)	124 (87.3)
What other women think about undergoing pelvic exam (most will undergo)	96 (30.9)	57 (28.5)	140** (34.5)	13 (12.4)	72 (31.03)	80 (28.9)	12 (30.0)	136 (29.5)	83 (22.7)	68** (47.9)
Husband allows wife for pelvic exam (no objection)	264** (84.9)	140 (70.0)	326 (80.3)	78 (74.3)	180 (77.6)	223 (80.8)	31 (77.5)	367 (79.6)	289 (78.9)	114** (80.3)
Comfortable to go to Government health center (yes)	303 (97.4)	188 (94.0)	388 (95.6)	103 (98.1)	218 (94.0)	271* (98.2)	38 (95.0)	447 (96.9)	357* (97.5)	132 (93.0)
Time suitable to attend Government hospital (clinic time suitable)	188 (60.5)	118 (59.0)	260** (64.03)	46 (43.8)	125 (53.9)	180** (65.2)	19 (47.5)	283 (61.4)	231* (63.1)	73 (51.4)

*P<0.05, **P<0.01

undergoing screening, the factors such as religion and occupation are significantly ($P < 0.01$) associated.

The present study conducted in Uttar Pradesh observed that women of younger age, literate women and their husband are more likely to avail screening facility. Older and illiterate women are less likely to avail screening facility. Appropriate strategy with additional efforts of focused health education on older and illiterate women population would yield more screening acceptance. A clear role of husbands in permitting their wives to undergo pelvic examination for cancer is positive in the context of screening uptake. The studies conducted elsewhere[4-11] described several factors in association with screening uptake.

A study conducted in rural south India reported a higher compliance with screening among younger, educated, married, multiparous, low-income women and those who had had tubal sterilization.[2] A cervical cancer screening trial in Maharashtra also concluded that the strategy for increasing screening uptake was to encourage older, less educated women and women who had less contact in availing services at health-care infrastructure.[1] Both these studies evaluated the factors related to compliance with the screening participation retrospectively, whereas the present study evaluated factors related to attitudes of women in the community before implementation of a screening project. Our findings on factors such as age and literacy are in agreement with both of the above mentioned large scale studies.

A study conducted among 1036 Turkey women to Identify Knowledge about cervical cancer and Pap test and barriers of participation in Cervical cancer screening reported 64.4% women having heard about cervical cancer, 43.1% had heard about pap test and only 24.7% had had a pap test at least once. They found a lack of awareness being uncomfortable with the procedure and not knowing where to go for Pap test were the common barriers to undergo screening.[4]

In a study conducted in UK among socially deprived women narrated the issues such as the timing of appointment, negative attitudes due to fear of embarrassment and feeling of stigma.[5] In other study among women of Somali in Camden, negative past experience of pelvic examination was found to be a barrier to uptake screening.[6] Our study showed out of 168 women previously had pelvic examination 148 (88.1%)

of them had a comfortable experience. This perception of previous examination as comfortable examination, i.e., not very painful and not embracing could be a positive motivating factor for women to participate in screening. Other factor could be a lack of knowledge that screening could be performed by such simple methods in a study at Bangladesh[7] in a focus group discussion in 220 men, women and adolescents. Although women were comfortable with per speculum examination by female health workers in an environment with sufficient privacy, many women were unaware of the possibility of screening through speculum examination although awareness about cervical cancer was widespread. Lack of availability of female screener also found to be a factor associated by psychosocial review study at UK.[8] This factor is not applicable in our setup as in the present study only female health workers were proposed to perform per speculum examination and screening.

A survey conducted in a region from Mexico, 197 women of reproductive age group were contacted and interviewed reasons for non-screening. The associated reasons found were ignorance, lack of interest, recent sexual onset, shame and fear. The study[9] recommended the need of promoting screening program in medical facilities for their population. The factor of acceptability of conducting screening program in existing government health facility was also studied by the present study. The opinion of acceptance for attending the Government setup was high (475/511) to undergo screening for cervical cancer prevention. Studies have shown non-suitable screening clinic time and place could be a factor negatively influencing women to undergo cervical screening.[2,8,9] The awareness about cancer prevention by screening is needed because many studies found it to be an important factor for non-participation. A study was conducted on how the husbands in general would take care of their wife's health.[10] The conclusion of the study was witnessing of reasonably favorable attitude of husbands toward their wives' health problems. In the present study in wife's opinion, a large proportion of husbands will have no objection for permitting their wife for cervical screening. A systematic review of interventions to increase breast and cervical cancer screening uptake among Asian women concluded that screening uptake in Asian women may hinge on a variety of factors, such as type of intervention and study population characteristics.[11]

There is a definite general need to educate women in the community on screening and treatment possibilities of cervical cancer. Special efforts are required for the core group of older and illiterate women of the community for a better impact on screening acceptance.

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