Original Research Article

Cervical cancer: perception of peripheral health workers in Lucknow: a cross-sectional study

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ABSTRACT

Background: Cervical cancer is one of the most prevalent cancers among Indian women. Cervical cancer incidence reduces dramatically when effective screening programs linked with access to treatment are in place and are readily accessible. Peripheral health workers (PHWs) being frontline workers have a major influence on raising awareness among community about acceptability of available screening programmes. This study was thus conducted to assess the awareness of PHWs regarding risk factors, signs and symptoms, early detection and prevention for cervical cancer.
Methods: A questionnaire-based study was conducted among 450 PHWs (ASHAs and BHWs). Information was collected regarding their bio-social characteristics, awareness about female cancers, risk factors, signs/symptoms, early detection methods and services available for screening and prevention of cervical cancer.
Results: Awareness of different aspects of cervical cancer was found to be very low. Only eight per cent of the PHWs had good awareness score. BHWs obtained statistically significant better mean scores as compared to ASHAs. Few (7.6%) PHWs had received training for any type of female cancers. Only 17 per cent of the PHWs were aware of HPV vaccine availability and only 29 per cent from them could name the vaccine.
Conclusions: Majority of the PHWs had poor awareness about cervical cancer and available screening facility in our health system. They had almost no idea of availability of free HPV vaccination at the Sampoorna clinics. This low level of awareness calls for regular training of PHWs on cervical cancer which would ultimately trickle down to the community.

Keywords: Peripheral health workers, Basic health workers, ASHA, Cervical cancer, Awareness, Perception

INTRODUCTION

Cervical cancer is one of the most prevalent cancers among the women, having high cure rates when detected early and treated according to best practices.[1,2] According to GLOBOCAN 2018, estimated age standardized incidence and mortality for cervical cancer was 11.9 and 4.3 respectively among women age 15-49 years.[3]

A high proportion of cervical cancer patients present in late stages.[4] According to NFHS-4 India report, only 22.0 per cent of the women age 15-49 years had undergone examination of cervix. It was also reported that among 0.2 per cent self-reported cancer in women, only 65.6 per cent had ever sought treatment for the same.[5] Cervical cancer screening programs are life-saving and cost-saving interventions that can greatly improve the quality of life

for the women.[6] Cervical cancer incidence reduces dramatically when effective screening programs linked with access to treatment are in place and are readily accessible.[7]

PHWs comprising of Accredited Social Health Activists (ASHAs) and Basic Health Workers (BHWs) are the grass root level workers of the health system. ASHA is a health worker selected from the community which she serves, giving her an opportunity to reach every household while BHWs have the prospects of being in contact with community during various sessions. PHWs have a major influence on the behaviour of community women which could be helpful in increasing their awareness about cervical cancer. But to motivate the community women about cervical cancer and its early detection methods, they themselves need to be knowledgeable. Keeping this in mind the present study was conducted to assess the awareness of peripheral health workers (PHWs) regarding risk factors, signs and symptoms, early detection methods of cervical cancer and its prevention.

METHODS

This was a questionnaire-based study conducted from September 2017 to August 2018, among female PHWs (ASHAs and BHWs) working in rural and urban areas. The sample size for the study was calculated using the following formula $N=[(Z_{(1-\alpha/2)})^2 \times p \times (1-p)]/d^2 \times DEFF$. Value of Z statistic for 5% level of significance is 1.96, hypothesized per cent frequency of awareness of female cancers among PHWs (p) was taken as 65.75%±6.5, assuming 10 per cent as non-response rate, and design effect of 2, sample size was calculated to be 450.[8]

Sampling method

Out of nine rural and eight urban community health centers (CHCs) of Lucknow, three rural and three urban CHCs were randomly selected. List of all the PHWs (BHWs and ASHAs) working in the six selected CHCs were obtained. From this list, 450 PHWs (183 BHWs and 267ASHAs) were selected by systematic random sampling method. Selected participants were contacted telephonically and meeting for the interview was fixed as per their working schedule. Participants, who could not be contacted telephonically, were contacted during their weekly or monthly meetings at their respective CHCs. Selected PHWs were informed about the purpose of the present study and written informed consent was taken from selected participant.

Data collection

A pre-designed and pre-tested semi-structured schedule was used for data collection. Information was collected regarding their bio-social characteristics (age, marital status, religion, category, family history of cervical cancer, education level, place of work, designation,

duration of service, socio economic status), training status of participants and their awareness about female cancers, awareness regarding risk factors, symptoms, early detection methods and services available for screening and prevention of cervical cancer. PHWs were also inquired whether they themselves had undergone screening for cervical cancer.

Data analysis

Data was analysed using SPSS version 24.0. Association between categorical variables was tested using Chi-Square test and t-test was used for continuous variables. A 'p' value of less than 0.05 was considered statistically significant. Bivariate and multivariate logistic regression model was performed to identify predictors of cervical cancer awareness. Results were reported in the form of adjusted odds ratios (AOR) and 95% confidence intervals (CIs).

Awareness score

Calculated by assigning score of 1 to correct response, 0 to incorrect or don't know. Scores of risk factors and symptoms of cervical cancer were calculated separately and then combined to get an overall score for cervical cancer.

RESULTS

Majority of the PHWs were married (388, 86.2%). More than half (104, 58.8%) of the BHWs had educational qualification graduate and above, while only one-third (83, 31.1%) of the ASHAs had education up to secondary school. About 3.1 per cent (14 PHWs) had family history of cervical cancer. Mean duration of service of the participants was 7.3±5.6 years. One third (152, 33.8%) of the PHWs belonged to lower middle socio-economic class (Table 1).

Majority of PHWs were aware of breast and uterine cancer but only about two third of the PHWs were aware of cervical cancer (Figure 1).
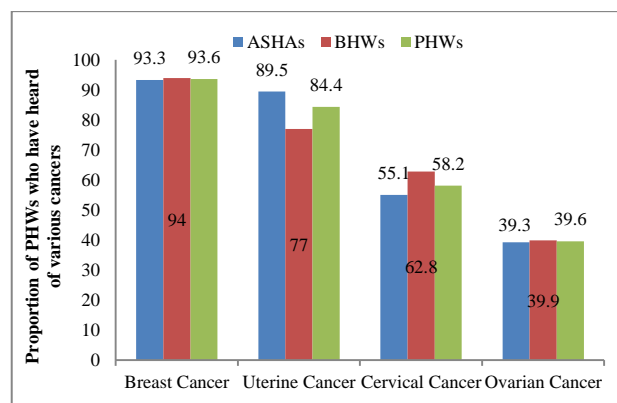

Figure 1: PHWs who have heard about various types of cancers among women (n=450).

Training status of PHWs

Only 34 (7.6%) PHWs had received any training for cancers of female patients in the past, out of which 31 (6.9%) were trained for breast cancer, 20 (4.4%) for uterine cancer and only three (0.7%) for cervical cancer. Out of 34 PHWs who had received training, 16 (47.1%) of them had received it in the last one year.

Table 1: Socio-demographic profile of PHWs (n=450).

Characteristics	ASHAs (n=267)	BHWs (n=183)	Total (n=450)
	N (%)	N (%)	N (%)
Age (in years)			
21-30	64 (24.0)	61 (33.3)	125 (27.8)
31-40	147 (55.1)	70 (38.3)	217 (48.2)
41-50	54 (20.2)	19 (10.4)	73 (16.2)
51-60	2 (0.7)	33 (18.0)	35 (7.8)
Mean age (SD)	36.2 (6.3)	37.1 (10.5)	36.5 (8.3)
Marital Status			
Unmarried	10 (3.7)	24 (13.1)	34 (7.6)
Married	240 (89.9)	148 (80.9)	388 (86.2)
Divorcee/widow	17 (6.3)	11 (6.0)	28 (6.3)
Religion			
Hindu	260 (97.4)	171 (93.4)	431 (95.8)
Muslim	6 (2.2)	7 (3.8)	13 (2.9)
Others	1 (0.4)	5 (2.7)	6 (1.3)
Category			
Other backward class (OBC)	67 (25.1)	63 (34.4)	130 (28.9)
Scheduled caste/scheduled tribe (SC/ST)	70 (26.2)	41 (22.4)	111 (24.7)
General/other	130 (48.7)	79 (43.2)	209 (46.4)
Family history			
Breast cancer	6 (2.2)	6 (3.3)	12 (2.7)
Cervical cancer	8 (3.0)	6 (3.3)	14 (3.1)
Education level			
Primary (class I to V)	8 (3.0)	0 (0.0)	8 (1.8)
Upper primary (class VI to VIII)	69 (25.8)	2 (1.1)	71 (15.8)
Secondary (class IX to X)	83 (31.1)	7 (3.8)	90 (20.0)
Senior secondary (class XI to XII)	52 (19.5)	70 (38.3)	122 (27.1)
Under graduate and above	55 (20.6)	104 (58.8)	159 (35.3)
Place of Work			
Rural	232 (86.9)	93 (50.8)	325 (72.2)
Urban	35 (13.1)	90 (49.2)	125 (27.8)
Duration of Service (years)			
≤5	95 (35.6)	111 (60.7)	206 (45.8)
>5	172 (64.4)	72 (39.3)	244 (54.2)
Mean duration of service (SD)	7.7 (4.6)	6.77 (6.7)	7.3 (5.6)
Median duration of service	11	4	7
Socioeconomic status[1]			
Upper (class I)	6 (2.2)	52 (28.4)	58 (12.9)
Upper middle (class II)	9 (3.4)	31 (16.9)	40 (8.9)
Middle (class III)	17 (6.4)	40 (21.9)	57 (12.7)
Lower middle (class IV)	106 (39.7)	46 (25.1)	152 (33.8)
Lower (class V)	129 (48.3)	14 (7.7)	143 (31.8)

[1]Modified BG Prasad's socio-economic classification.

Majority of the ASHAs were unaware of the probability of increased risk of cervical cancer due to 'multiparity' (181, 68%), 'early child birth' (158, 59%), 'unprotected sex' (147, 55%), 'early marriage' (124, 47%), 'multiple sexual partners' (103, 38.6%) as risk factors for cervical cancer. Many of the ASHAs perceived 'multiple abortions' (159, 59.6%), 'leucorrhoea' (128, 48%), 'home delivery in past' (117, 43.8%) as risk factors for cervical cancer (Table 2).

Table 2: Perception of ASHAs regarding factors affecting the probability of having cervical cancer (n=267).

Factors affecting probability of having cervical cancer in a woman	Don't know N (%)	Increased risk N (%)	Decreased risk N (%)	No effect N (%)
Early marriage (before 18 years of age)	90 (33.7)	143 (53.6)	11 (4.1)	23 (8.6)
Early child birth (before 17 years of age)	115 (43.1)	109 (40.8)	14 (5.2)	29 (10.9)
Long duration of OCP intake (>5 years)	114 (42.7)	87 (32.6)	8 (3.0)	58 (21.7)
Given birth to three or more children	111 (41.6)	86 (32.2)	12 (4.5)	58 (21.7)
Multiple sexual partners	84 (31.5)	164 (61.4)	2 (0.7)	17 (6.4)
Unprotected sex (without condoms)	84 (31.5)	120 (44.9)	8 (3.0)	55 (20.6)
HIV infection	190 (71.2)	61 (22.8)	5 (1.9)	11 (4.1)
Family history of cervical cancer in mother, sister or daughter	109 (40.8)	70 (26.2)	5 (1.9)	83 (31.1)
Low socio-economic status	101 (37.8)	99 (37.1)	7 (2.6)	60 (22.5)
Smoking	86 (32.2)	167 (62.5)	2 (0.7)	12 (4.5)
Alcohol intake	106 (39.7)	145 (54.3)	3 (1.1)	13 (4.9)
Improved sexual hygiene	112 (41.9)	61 (22.8)	52 (19.5)	42 (15.7)
Home delivery in past pregnancies	102 (38.2)	117 (43.8)	5 (1.9)	43 (16.1)
Prolonged labour (>12 hours of duration)	127 (47.6)	90 (33.7)	5 (1.9)	45 (16.9)
Multiple abortions	91 (34.1)	159 (59.6)	7 (2.6)	10 (3.7)
Leucorrhoea	127(47.6)	128 (47.9)	2 (0.7)	10 (3.7)

Table 3: Perception of BHWs regarding factors affecting the probability of having cervical cancer (n=183).

Factors affecting probability of having cervical cancer in a woman	Don't know N (%)	Increased risk N (%)	Decreased risk N (%)	No effect N (%)
Early marriage (before 18 years of age)	65 (35.5)	89 (48.6)	3 (1.6)	26 (14.2)
Early child birth (before 17 years of age)	70 (38.3)	80 (43.7)	8 (4.4)	25 (13.7)
Long duration of OCP intake (>5 years)	66 (36.1)	69 (37.7)	10 (5.5)	38 (20.8)
Given birth to three or more children	68 (37.2)	46 (25.1)	5 (2.7)	64 (35.0)
Multiple sexual partners	55 (30.1)	121 (66.1)	2 (1.1)	5 (2.7)
Unprotected sex (without condoms)	57 (31.1)	98 (53.6)	5 (2.7)	23 (12.6)
HIV infection	88 (48.1)	88 (48.1)	1 (0.5)	6 (3.3)
Family history of cervical cancer in mother, sister or daughter	62 (33.9)	61 (33.3)	2 (1.1)	58 (31.7)
Low socio-economic status	69 (37.7)	46 (25.1)	4 (2.2)	64 (35.0)
Smoking	49 (26.8)	113 (61.7)	2 (1.1)	19 (10.4)
Alcohol intake	51 (27.9)	108 (59.0)	1 (0.5)	23 (12.6)
Improved sexual hygiene	54 (29.5)	27 (14.8)	68 (37.2)	34 (18.6)
Home delivery in past pregnancies	56 (30.6)	100 (54.6)	2 (1.1)	25 (13.7)
Prolonged labour (>12 hours of duration)	91 (49.7)	53 (29.0)	1 (0.5)	38 (20,8)
Multiple abortions	50 (27.3)	128 (69.9)	1 (0.5)	4 (2.2)
Leucorrhoea	55 (30.1)	114 (62.3)	3 (1.6)	11 (6.0)
Home delivery	56 (30.6)	100 (54.6)	2 (1.1)	25 (13.7)

Majority of the BHWs didn't know about 'multiparity' (137, 75%), 'early child birth' (103, 56%), 'early marriage' (94, 51%), 'unprotected sex' (85, 46%), 'multiple sexual partners' (62, 34%) 'poor sexual hygiene' (115, 62.9%) as risk factors. Many of them perceived 'multiple abortions' (128, 70%), 'leucorrhoea' (114, 62%), 'home delivery in past pregnancies' (100, 55%) and 'prolonged labour' (53, 29%) as the risk factors for cervical cancer (Table 3). Only 52 (11.6%) PHWs knew all the common risk factors of cervical cancer

(multiple sexual partners, unprotected sex, early marriage, poor sexual hygiene).

BHWs had better awareness regarding signs/symptoms of cervical cancer as compared to ASHAs and the difference was found to be statistically significant (Table 3).

Many of the PHWs perceived that 'genital ulcers' (191, 42.4%), 'prolapse of uterus' (146, 32.4%), 'increased frequency of micturition' (129, 28.7%) are symptoms of cervical cancer. About one fifth (96, 21%) of the PHWs

were unaware of any symptom of cervical cancer while only 70 (16%) PHWs were aware of all the common symptoms of cervical cancer (Table 4).

Table 4: Awareness of PHWs regarding signs/symptoms of cervical cancer (n=450).

Signs/symptoms	ASHAs (n=267)	BHWs (n=183)	Total (n=450)	*P value
	N (%)	N (%)	N (%)	
Pain and bleeding during sexual intercourse	134 (50.2)	114 (62.3)	248 (55.1)	0.011
Foul smelling vaginal discharge	121 (45.3)	105 (57.4)	226 (50.2)	0.012
Pelvic pain	120 (44.9)	95 (51.9)	215 (47.8)	0.15
Painful and burning micturition	118 (44.2)	87 (47.5)	205 (45.6)	0.48
Vaginal bleeding between periods	109 (40.8)	93 (50.8)	202 (44.9)	0.04
Menstrual periods that are longer or heavier (clots) than usual	101 (37.8)	98 (53.6)	199 (44.2)	0.001
Bleeding after sexual intercourse	89 (33.3)	92 (50.3)	181 (40.2)	0.000
Unexplained weight loss	70 (26.2)	85 (46.4)	155 (34.4)	0.000
Bleeding in post - menopausal women	58 (21.7)	76 (41.5)	134 (29.8)	0.000
No symptom appear in early stages	55 (20.6)	53 (29.0)	108 (24.0)	0.04
Genital ulcers	94 (35.2)	97 (53.0)	191 (42.4)	0.00
Prolapse of uterus	70 (26.2)	76 (41.5)	146 (32.4)	0.001
Increased frequency of micturition	64 (24.0)	65 (35.5)	129 (28.7)	0.008
Didn't know about any symptom	57 (21.3)	39 (21.3)	96 (21.3)	
**Awareness of all common symptoms	23 (8.6)	47 (25.7)	70 (15.6)	0.000

*Chi square test;
**Common symptoms: pain and bleeding during sexual intercourse, vaginal bleeding between periods, bleeding in post - menopausal women, vaginal bleeding between periods.

Awareness about causative agent

One fourth (113, 25.1%) of the PHWs knew that causative agent of cervical cancer is a virus and only less than half of them (51, 45.1%) knew that HPV is the causative agent. Only 31 (6.9%) PHWs were aware that women between the late teens and mid-30s are at a greater risk of having cervical cancer.

Awareness of early detection methods

At least two-third (293, 65%) of the PHWs knew that early detection of cervical cancer is possible with the help of investigations while only 21 (8%) ASHAs and 32 (18%) BHWs knew that regular screening for cervical cancer is required in female aged 30 years and above. More than half (260, 58%) of the PHWs perceived that cervical cancer is a curable disease if detected early and 69 per cent (311) said that it is fatal if not treated timely.

Awareness about screening and its availability

Very few PHWs were aware of the Pap test (64, 14%) and visual inspection with acetic acid (54, 12%) as investigations for early detection of cervical cancer. Medical college was recognized by about half (259, 57.6%) of the PHWs as a place where investigations for detection of cervical cancer are available. Only three ASHAs mentioned about the 'Sampoorna clinic' for investigations of cervical cancer. There was a significant difference in the awareness of ASHAs and BHWs for Pap smear test.

Awareness about vaccination and its availability

Less than two fifth (77, 17%) of the PHWs were aware of vaccination against cervical cancer and only 22 (28.6%) could name the vaccine while only eight (10%) PHWs were aware of the correct age of vaccination. About half of the PHWs said vaccine is available in medical college (36, 47%) and district hospital (26, 34%). Three ASHAs were aware that vaccine is also available at Sampoorna clinic. There was a significant difference between ASHAs and BHWs regarding vaccine awareness and its correct age of administration.

Self-screening practices by PHWs and its barriers

Out of 64 PHWs who were aware of Pap test, only 4 ASHAs (15%) and 5 BHWs (14%) had undergone Pap test. Out of 77 PHWs who knew about HPV, only 2 of ASHAs had motivated others to get HPV vaccination.

Most common (21, 38.2%) reason for not getting a pap test done was given as 'not perceiving the need to have a Pap test done'. Other reasons stated were absence of any symptoms (9, 16.4%), lack of awareness and no medical advice (7, 13% each), 11 per cent felt that they were unmarried so they don't need it while 9 per cent said time constraints to get the test done.

Table 5: Logistic regression analysis for predictors of awareness of cervical cancer.

Variables	Bivariate analysis				Multivariate analysis			
	Odds ratio (OR)	95% CI		P value	Adjusted Odds ratio (OR)	95% CI		P value
		Lower limit	Upper limit			Lower limit	Upper limit	
Age (in years)								
≤35	1.03	0.71	1.49	0.89	-	-	-	-
>35				-Reference-				
Marital status								
Married	1.86	1.08	3.21	0.026	-	-	-	-
Others				-Reference-				
Religion								
Hindu	1.04	0.41	2.61	0.93	-	-	-	-
Others				-Reference-				
Category								
General	1.16	0.80	1.68	0.44	-	-	-	-
OBC SC/ST				-Reference-				
Education level								
Up to upper primary	0.78	0.53	1.15	0.21	-	-	-	-
Secondary and above				-Reference-				
Designation								
ASHAs	0.53	0.36	0.78	0.001	0.54	0.37	0.80	0.002
BHW				-Reference-				
Duration of service								
≤10	1.02	0.70	1.48	0.94	-	-	-	-
>10				-Reference-				
Place of work								
Rural	0.67	0.44	1.02	0.06	-	-	-	-
Urban				-Reference-				
Socioeconomic status								
Class I and II	1.93	1.23	3.04	0.005	-	-	-	-
Class III-V				-Reference-				
Family history of cervical cancer								
No	0.23	0.06	0.83	0.024	0.21	0.06	0.76	0.017
Yes				-Reference-				
Training status for female cancers								
No	0.17	0.06	0.50	0.001	0.17	0.06	0.51	0.002
Yes				-Reference-				

Scoring of awareness

Mean score of cervical cancer awareness was 10.42±5.95 out of 31 and median was 11. Mean score for risk factors and symptoms was 5.82±3.39 and 4.16±3.20 out of 15 and 10 respectively and median scores were 6 and 4 respectively. There was statistically significant difference between mean scores of ASHAs and BHWs.

About two thirds (272, 60%) of the PHWs scored below average (Figure 2) whereas there were only 11 (4%) ASHAs and 27 (15%) BHWs who had an above average score in cervical cancer overall awareness. About 26 per cent (118 PHWs) had above average score in symptoms

and only 6.4 per cent (29 PHWs) had above average score for risk factors.

A logistic regression model was performed to ascertain the effects of socio-demographic variables on the likelihood of getting an above median cervical cancer awareness score. Marital status of the PHWs, their designation, socio-economic status, their family history of cervical cancer and training status for female cancers had significant association with awareness scores of cervical cancer on bivariate analysis. On multivariate logistic regression, ASHAs, PHWs with no family history of cervical cancer and no training for female cancers were

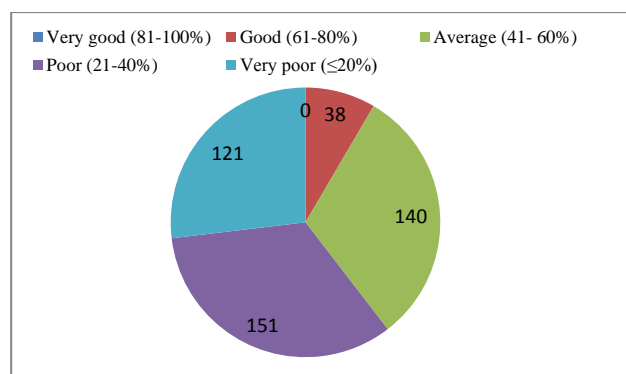found to have had higher chances of getting a 'below median' score (Table 4).

Figure 2: Grading of awareness of cervical cancer among PHWs.

DISCUSSION

Awareness regarding cervical cancer was found to be very low in the present study with only eight per cent of the PHWs having good awareness score. BHWs had statistically significant better mean scores as compared to ASHAs. Good knowledge was reported among nursing staff ranging from 27 percent by Shekhar et al to 70 percent by Swapnajaswanth et al.[9,10] Poor level of awareness was reported by Sreedevi et al among women in a rural population of Kerala.[11] About 58 per cent of the PHWs had heard about cervical cancer in the present study. This was almost similar to the awareness level of 60 to 82 per cent regarding cervical cancer among community women.[12,13]

Training status of the study participants was very low in the district. Only 7.6 per cent of the PHWs had reportedly received training for any type of female cancers in the past. Even Gedam et al reported that only 33 per cent of the nurses had received education on cervical cancer and HPV in the past.[14]

Despite continued training on STI/RTI being provided to healthcare professional, only about two thirds of the ASHAs and BHWs in the present study were aware of 'multiple sexual partners' and only about half of the PHWs knew that 'unprotected sex' as risk factors for cervical cancer. Researchers have reported similar level of awareness among community women of North Bengal and Tripura and HCP of Chennai Corporation about 'multiple sexual partners' as risk factor.[13,16,17] But lower levels of awareness was reported among community women of Tamil Nadu (20.5%) and Kolkata (20%).[12,18] Gedam et al reported 54 per cent awareness about 'unprotected sex' as a risk factor for cervical cancer among healthcare professionals of a tertiary care center in Mumbai.[14] Only about one fourth of the ASHAs (19.5%) and BHWs (37.2%) were aware that 'poor sexual hygiene' can increase the risk of cervical cancers. Still

lower awareness was noted among community women as reported by other researchers.[11,16,19]

Only about 16 percent of the PHWs were aware of all common symptoms of cervical cancer (pain and bleeding during sexual intercourse, vaginal bleeding between periods, bleeding in post-menopausal women, and vaginal bleeding between periods). Raychaudhuri et al reported that 93.7 percent women in rural and urban area of North Bengal were unaware of signs and symptoms of cervical cancer.[13]

Vaginal bleeding between periods, pain and bleeding associated with sexual intercourse and foul smelling vaginal discharge were the symptoms known to only about half of the PHWs. This is almost equal to the awareness among rural community women of Tamil Nadu in the study conducted by Krishnaveni et al.[18]

'Bleeding in post-menopausal women' as a risk factor of cervical cancer was known to only 30 percent of the PHWs. Community women of rural Tamil Nadu had similar awareness (43%) as reported by Krishnaveni et al while nurses and doctors had good (93%) awareness as reported by Anantharaman et al.[17,18]

Many of the PHWs spuriously perceived that 'multiple abortions' (63.8%), 'leucorrhoea' (53.8%), 'home delivery in past pregnancies' (48.2%) and 'prolonged labour' (31.8%), are the risk factors for cervical cancer. About one fourth (28.7%) of the PHWs spuriously perceived that 'increased frequency of micturition' is a symptom of cervical cancer which was also perceived by 6.8 percent nursing staff at a rural tertiary care hospital in central India.[15] 'Genital ulcers' (42.4%) and 'prolapse of uterus' (32.4%) were the perceived symptoms of cervical cancer pointing towards prevailing myths about cervical cancer.

Only about half (58%) of the PHWs perceived that cervical cancer is curable in case of early detection. Similar results were reported among community women and nursing staff by other researchers.[9,12,16,20] About two third (69%) PHWs said that cervical cancer is fatal if not treated timely. However, Jain et al reported that 21 per cent of the nursing staff at a rural tertiary care hospital in Central India thought it was a fatal disease.[15]

Only about two third (65%) of PHWs were aware of the fact that early detection of cervical cancer is possible with the help of investigations. Similar results were demonstrated among community women of Kerala, Kolkata and Tripura.[11,12,16] Higher level of awareness about this fact was shown among women of rural Tamil Nadu; and nursing staff of Chennai and central India.[15,17,18]

Although about two-thirds of the PHWs were aware of the possibility of early detection of cervical cancer, awareness about screening modalities was found to be

very low. Pap test was known to only 14 per cent of the PHWs. Similar findings were reported among women across India showing awareness level ranging from about 6 per cent to 16 per cent while awareness was a way much higher among healthcare professional, ranging from 81 per cent to 95 per cent.[11,13,15-17,19] Awareness of VIA was also found to be low (14%) among PHWs in present study; similar to the awareness reported among nurses and nursing students at TCCs of rural India and Mumbai.[9,14]

Even those who were aware about screening modalities for cervical cancer had not got themselves screened for it. Only 14 percent of PHWs who were aware of Pap test, had undergone the test.

Only 17 per cent of the PHWs were aware of HPV vaccine availability and only 29 per cent from them could name the vaccine. Awareness about vaccine was similar among community women as reported in studies conducted by other researchers.[16,18,19] However, Raychaudhuri et al reported high awareness about HPV vaccine among women (86%) in rural and urban area of North Bengal. Healthcare professionals had pretty good awareness.[9,14,21,22] Awareness regarding Sampoorna clinic providing screening and vaccination facility for cervical cancer was also found to be very low in the present study.[23]

CONCLUSION

The present study concluded that majority of the PHWs had poor awareness about cervical cancer and available screening facility in our health system. They had almost no idea of availability of free vaccination for cervical cancer at the Sampoorna clinics.

Standardized training for STI/ RTI is being provided to the medical and paramedical personnel based on syndromic case management approach. Government of Uttar Pradesh has also launched the 'Sampoorna' project at selected CHCs and district hospitals, under the umbrella of National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in the year 2015 as initiative dedicated to screening and treating women with emphasis on cervical and breast cancer screening.[23]

This low level of awareness calls for regular training of PHWs on cervical cancer and need for its screening. Training of STI/RTI should be strengthened which should also emphasize on infections like HIV and Human papilloma virus as well as cervical cancer. There is need of continuous sensitization and reorientation of PHWs for cervical cancer, during their monthly meeting at CHCs. ASHAs can also be oriented during cluster meetings on signs and symptoms of cervical cancer. Message should trickle down to PHWs which will ultimately help screening of community for cervical cancer.

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