Research Article

Assessing the awareness level of breast and cervical cancer: a cross-sectional study in northeast India

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Abstract

Background: Breast and cervical cancers are leading causes of deaths in India among female population. To reduce the mortality rate, awareness is of major concern of current time.

Objective: To study the awareness of breast and cervical cancers among common women based on different factors such as age, residence, and occupation.

Materials and Methods: A cross-sectional study was performed on 1000 common women who can efficiently represent different age groups, occupation, and place of residence. Study population were subdivided into two equal groups where one group participated in breast cancer survey and another group in cervical cancer survey. The χ^2 analysis was performed to study the significant association of different factors with various knowledge related to breast and cervical cancers among the study groups. Then, MANOVA test, followed by post hoc Duncan test, was performed to delve deeper into the study.

Result: Result showed that there was a high-significant association ($p < 0.01$) of factors such as age, residence, and occupation with the knowledge of breast and cervical cancers and there was significant difference in the knowledge level perceived by different groups under study.

Conclusion: People of rural area were less aware of breast cancer and cervical cancer. Considering occupation factor, it was observed that knowledge of housewives was less when compared with working women and students. But, age showed different impact on breast and cervical cancers awareness.

KEY WORDS: Breast cancer survey, cervical cancer survey, chi-square, MANOVA, post hoc Duncan test

Introduction

Breast cancer and cervical cancer are the most prevalent cancers among the women of India. Cervix forms the lower part of the uterus, and cervical cancer affects the cells lining the cervix. Breast cancer starts when cells from breast begin to grow out of control. If one looks at the global statistics, a study of World Health Organization reveals that the most commonly diagnosed cancers among female population were breast cancer (1.7 million, 11.9%) and cervical cancer (2,66,000) in 2012.[1] Incidence of breast and cervical cancers in India is among the top three positions of global statistics. During 2012, 1,44,937 women were newly detected with breast cancer and 70,218 (12.7%) died, which indicates that, of every 2 women newly diagnosed with breast cancer, one woman is dying of it. On the other hand, cervical cancer in India holds second position with an incidence of 1,22,844 (22.9%). Cities in northeastern India show surprisingly a high number of breast cancers occurring in younger women,[2] compared with rest of India. Similarly, there is a high occurrence of cervical cancer too. The annual report of Dr B Borooah Cancer Institute, a reputed regional cancer research institute in northeastern India, reflected that percentages of the new cancer cases registered during 2013–2014 for breast and cervix cancers were 16.86% and 13.12%, respectively, standing in first and second highest cancers among female population.

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According to World Health Organization, "early detection of cancer greatly increases the chances for successful treatment." Education regarding early detection and screening form the two chief components of early recognition of cancer. It is also noted that breast and cervical cancers can be cured if detected early. But, unfortunately, this has little impact on northeastern states of India. Sarma et al.[3] have done a comparison of age-adjusted incidence rates (AARs) of all population-based cancer registries of India, which reflected that three major cities of northeast India is among the top five of the list. Aizawl district (AAR = 210.0), Mizoram state (AAR = 152.8), and Kamrup Urban district (AAR = 133.8) were the three districts, which are also three most populated places of northeastern India. This inspired us to explore the knowledge level of both types of cancer among a group of women to study its impact on its incidence.

In this study, attempt was made to study the awareness of breast and cervical cancers prevailing among 1000 women of northeastern India. Questionnaires were prepared related to different knowledge influencing these two types of cancers. The χ^2 analysis was used to study the significant association of knowledge on different groups of people involved in the study. Later, MANOVA along with post hoc test were used to find out whether these levels of knowledge differ among the subgroups associated.

Many researchers have attempted to investigate the reasons behind the high occurrence of cervical cancer in different parts of India. Donta et al.[4] performed a survey in a slum area of Mumbai on 1958 women, which showed that only 37.7% awareness was present among them regarding cervical cancer. Shah et al.[5] tried to explore the awareness among the nursing staff of a tertiary health-care institute in Ahmedabad, Gujrat, India. They found that 69% women were aware of the particular cancer. Similar study was performed in Kolkata, India,[6] among female students, which indicated only 20% awareness. Similarly, Aswathy et al.[7] explored the knowledge of rural women of Kerala.

Similarly, breast cancer awareness has also been monitored by many researchers. Baridalyne and Somdatta[8] studied the awareness of breast cancer among women in an urban resettlement colony in Delhi and found that 56% were aware of this type of cancer. A study performed by Oza et al.[11] on nursing staff in Civil Hospital in Ahmedabad, Gujrat, India, showed 74% awareness. Similar study was carried out by Khokhar[12] on 441 teachers from 8 schools of Delhi, and Rao et al.[13] explored the awareness among women of coastal villages in Southern India. From the literature, it can be observed that northeastern states of India are yet to be investigated to study the awareness regarding cervical cancer and breast cancer although statistics show high incidence of these cancers in this region.

Different statistical tests were used to monitor the awareness of knowledge prevailing for breast and cervical cancer by the studies. Some of these tests include Z-test,[5,13] modified Kuppuswamy scale,[8] kappa statistics,[4] multivariate logistic regression test,[7] and χ^2.[14]

Materials and Methods

Study Design

In this cross-sectional study, 1000 women were considered for the study, which were then equally divided into two groups containing 500 women each. Using selective sampling design, the women for the survey were carefully selected so that the sample would represent women with different age groups appropriately and would also reflect suitably the place of residence and occupation. Then, each 500 women were categorized based on age, occupation, and residence. Four age groups were considered for the study: 18–25, 26–35, 36–45, and above 45 years. Similarly, groups based on place of residence were urban and rural, and occupation-based groups were students, working women, and housewives. The women were explained the purpose of the study, and all those who consented to participate in the same were asked the questions of the questionnaire. The study was done during January 2014 and September 2014.

Figure 1 gives a graphical representation of the distribution of respondents for the study. Students included in the study were selected from an engineering college of Meghalaya, India; working women were selected randomly from different commercial organizations, and housewives were selected from four villages of upper Assam, India.

A hierarchical study was performed to obtain a superior view of the problem concerned, which is displayed in Figure 2.

Questionnaires

A set of two questionnaires (pro forma I and II) were developed to assess the existing knowledge of breast and cervical cancers among women involved. Pro forma I contained questions on breast cancer and pro forma II questions on cervical cancer. Women of group 1 answered the questions from pro forma I and women of group 2 answered pro forma II. Pro forma I contained 14 questions regarding different knowledge on breast cancer and pro forma II 7 questions regarding different knowledge on cervical cancer. For reliability and validity, the questionnaires were pretested on 50 randomly selected women of Guwahati city of Assam, India, and the final pro forma was designed so that they were easily understandable by women belonging to different age groups. These women were not included in final survey. Only basic knowledge was tested without going into detailed medical terminologies. Each question was answered in a "yes" or "no." In the following discussions, each questions are termed as knowledge i, where i = 1, 2, 3, …, 14 for breast cancer survey and i = 1, 2, …, 7 for cervical cancer survey, which will indicate different levels of knowledge. Details of pro forma I and II are given in Appendix.

Statistical Test

Results were analysed by using SPSS, version 16. Three types of statistical tests were performed on the data collected. The χ^2-test was used to study the significant association of knowledge on different study groups, which included groups

based on age, occupation, and residence. Furthermore, MANOVA was done to study the effect of each knowledge *i* separately and collectively on the factors under consideration. This was followed by post hoc Duncan test to identify the subgroups of factors that are significantly different from each other. For this study, three groups or factors were considered. They were age, place of residence, and occupation, which were again subdivided into subgroups. Subgroups of age were A1 (18–25 years), A2 (26–35 years), A3 (36–45 years), and A4 (above 45 years). Subgroups of residence were rural (R) and urban (U), and subgroups of occupation factor were housewives (H), working women (W), and students (S). Each answer was scored as "0" for negative responses and "1" for positive responses. The Duncan multiple range test (MRT) was selected for post hoc analysis as this test is especially protective against type II errors at the expense of having a greater risk of making type I error, and in our study, we presumed that the failure to reject the false null hypothesis may be considered as more crucial.

Results

Level 1: Knowledge Level of Breast and Cervical Cancers

Table 1 shows the frequency of positive responses corresponding to different groups of people for both breast and cervical cancer surveys. It is clear from the frequency table that there was a marked difference in knowledge among the groups of women involved. In Table 1, bold values represented the lower positive responses in different groups of study variables.

Level 2: Association of Different Factors With Knowledge

The χ^2-test for independence was used to determine whether there was a significant association among the factors age, place of residence, and occupation of the study population with overall knowledge of the respondents regarding breast and cervical cancers awareness. Here, the total knowledge of the respondents was calculated and χ^2-test performed. Table 2 shows the χ^2 and *p* values for three factors. As revealed, the knowledge of respondents was very highly associated with the factors under study.

Level 3: Study of Effective Groups

As the knowledge of the respondents revealed a high degree of association with the dependent factors, it was our intention to analyze which knowledge factor was affected significantly. With this purpose, a MANOVA was conducted considering the knowledge as dependable variables (DVs) and the three factors as fixed factors. The results are shown in Table 3. The null hypothesis is H_0 ($\mu_1 = \mu_2 = ... = \mu_{14}$)for all the factors.

As revealed in Table 3, all the three factors, once again revealed overall influence of DVs to a highly significant level. Hence, a step-down analysis involving univariate *F* test was done for each DV to interpret the respective effect. The results are shown in Table 4. Furthermore, to analyze which subgroups of age and occupation affected in what order, the post hoc Duncan test (multiple comparison test) was applied [Table 5]. In case of post hoc Duncan test, the intrasubset knowledge differences was negligible when compared with intersubset knowledge differences. In addition, this test does not apply to the factor residence as there were only two groups considered for the study.

Discussion

From Table 1, we observed that knowledge is highly affected by the three factors studied—age, place of residence, and occupation. Bold values of the table indicate the subgroups that were less aware of breast and cervical cancers. From both breast cancer survey and cervical cancer survey, it can be observed that rural women showed less knowledge compared with urban women based on the place of residence factor. Similarly, housewives were less aware compared with other two groups based on occupation factor. But, there was a difference in knowledge about breast cancer and cervical cancer based on age factor. In breast cancer survey, women who were found less aware belonged to the age subgroup 18–25 years; but, in the case of cervical cancer, women in the age subgroup above 45 years showed less knowledge. Another conclusion that can be drawn from Table 1 is that frequency of positive responses received for cervical cancer was low when compared with breast cancer, which reflects that cervical cancer knowledge is even lesser when compared with breast cancer. Most of the women tried to avoid questions on cervical cancer, which forced us to remove some of the questions from pro forma II. This is because of logics behind their perception.

Considering overall knowledge, it was seen from Table 2 that each of the factors revealed a highly significant effect. There are many factors that might affect the knowledge of the women. Predominantly would be the taboo associated with discussing the risk factors associated the disease. Another factor could be the level of percolation to grass-root level of the government initiatives regarding awareness of the disease, either via camps or through media communications. So, understandably, women belonging to different age, occupation, and residential background would show different levels of exposure. This was reflected in MANOVA test [Table 3].

Table 4 gives us the picture how the three independent factors influenced the pattern of response or *p* values obtained; it was observed that age was highly associated with all knowledge of breast cancer except knowledge 9 (Do you think giving birth after age of 30 increases breast cancer?), knowledge 13 (Have you ever done prediagnostic test?), and knowledge 14 (Do you know about any government scheme for breast cancer awareness?). On observation, it was seen that all the age group women have given approximately equal numbers of response. These women belonged to the working

Table 1: Count and percentage of respondents giving positive "yes" responses

	Age group (years)				Residence		Occupation		
	18–25	**26–35**	**36–45**	**>45**	**Rural**	**Urban**	**Housewife**	**Working women**	**Student**
Breast cancer survey (count and percentage of positive responses)									
Knowledge 1	67 (13.4)	14 (2.8)	22 (4.4)	**8 (1.6)**	83 (16.6)	**28 (5.6)**	32 (6.4)	**14 (2.8)**	64 (12.8)
Knowledge 2	1 (0.2)	7 (1.4)	6 (1.2)	**4 (0.8)**	**2 (0.4)**	16 (3.2)	**2 (0.4)**	9 (1.8)	7 (1.4)
Knowledge 3	20 (4)	**8 (1.6)**	22 (4.4)	18 (3.6)	**17 (3.4)**	51 (10.2)	**17 (3.4)**	25 (5)	26 (5.2)
Knowledge 4	**31 (6.2)**	32 (6.4)	46 (9.2)	**31 (6.2)**	**26 (5.2)**	114 (22.8)	**37 (7.4)**	44 (8.8)	59 (11.8)
Knowledge 5	**6 (1.2)**	20 (4)	14 (2.8)	9 (1.8)	**7 (1.4)**	42 (8.4)	**8 (1.6)**	17 (3.4)	24 (4.8)
Knowledge 6	12 (2.4)	17 (3.4)	10 (2)	**9 (1.8)**	**5 (1)**	43 (8.6)	11 (2.2)	**9 (1.8)**	28 (5.6)
Knowledge 7	**7 (1.4)**	16 (3.2)	14 (2.8)	11 (2.2)	**6 (1.2)**	42 (8.4)	17 (3.4)	**7 (1.4)**	24 (4.8)
Knowledge 8	**16 (3.2)**	18 (3.6)	27 (5.4)	18 (3.6)	**10 (2)**	69 (13.8)	**21 (4.2)**	24 (4.8)	34 (6.8)
Knowledge 9	**16 (4)**	18 (3.4)	27 (3)	18 (2.2)	**3 (0.6)**	60 (12)	**7 (1.4)**	19 (3.8)	37 (7.4)
Knowledge 10	**11 (2.2)**	15 (3)	34 (6.8)	20 (4)	**11 (2.2)**	69 (13.8)	**22 (4.4)**	31 (6.2)	27 (5.4)
Knowledge 11	**21 (4.2)**	28 (5.6)	42 (8.4)	26 (5.2)	**18 (3.6)**	99 (19.8)	**29 (5.8)**	38 (7.6)	50 (10)
Knowledge 12	8 (1.6)	1 (0.2)	**0 (0)**	**0 (0)**	**4 (0.8)**	5 (1)	1 (0.2)	**0 (0)**	8 (1.6)
Knowledge 13	5 (1)	2 (0.4	2 (0.4)	**0 (0)**	**5 (1)**	4 (0.8)	3 (0.6)	**2 (0.4)**	4 (0.8)
Knowledge 14	2 (0.4)	3 (0.6)	**0 (0)**	**0 (0)**	4 (0.8)	**1 (0.2)**	4 (0.8)	**0 (0)**	1 (0.2)
Cervical cancer survey (count and percentage of positive response)									
Knowledge 1	25 (5.0)	25 (5.0)	11 (2.2)	**3 (0.6)**	**0 (0)**	64 (12.8)	**0 (0)**	41 (8.2)	23 (4.6)
Knowledge 2	12 (2.4)	23 (4.6)	17 (3.4)	**3 (0.6)**	**6 (1.2)**	49 (9.8)	**6 (1.2)**	32 (6.4)	17 (3.4)
Knowledge 3	5 (1.0)	3 (0.6)	2 (0.4)	**0 (0)**	**0 (0)**	10 (2)	**0 (0)**	7 (1.4)	3 (0.6)
Knowledge 4	1 (0.20)	2 (0.4)	**2 (0.40)**	**0 (0)**	**0 (0)**	5 (1)	**0 (0)**	2 (0.4)	3 (0.6)
Knowledge 5	1 (0.2)	**0 (0)**	3 (0.6)	**0 (0)**	**2 (0.4)**	2 (0.4)	2 (0.4)	**1 (0.2)**	**1 (0.2)**
Knowledge 6	**0 (0)**	**0 (0)**	**0 (0)**	**0 (0)**	**0 (0)**	**0 (0)**	**0 (0)**	**0 (0)**	**0 (0)**
Knowledge 7	**0 (0)**	1 (0.2)	**0 (0)**	**0 (0)**	**0 (0)**	1 (0.2)	**0 (0)**	**0 (0)**	1 (0.2)

Bold values represent the lower positive responses in different groups of study variables.

Table 2: Result of χ^2 analysis

	χ^2	*p*
Breast cancer survey		
Age	156.926	0.000**
Residence	214.158	0.000**
Occupation	198.388	0.000**
Cervical cancer survey		
Age	45.96	0.000**
Residence	85.959	0.000**
Occupation	70.29	0.000**

**p = 1% level of significance.

Table 3: Result of MANOVA

	F	Significance
Breast cancer survey		
Age	4.18	0.000**
Residence	0.426	0.000**
Occupation	0.436	0.000**
Cervical cancer survey		
Age	0.121	0.000**
Residence	0.192	0.000**
Occupation	0.152	0.000**

**p = 1% level of significance.

or educated group and living in urban areas. So, their exposure would be alike. Similarly, influence was also evaluated for place of residence and occupation factor for breast cancer. It was observed that place of residence did not significantly influence knowledge 12 (Do you know about the risk factors of breast cancer?) knowledge 13, and knowledge 14. This was a surprising revelation, as expectedly people of urban background were supposed to know more about risk factors, prediagnostic tests, and government schemes. This revelation indicated that government initiative were not adequate even in urban settings. Furthermore, occupational differences did not influence only for the knowledge 13 and 14 and influenced knowledge 7 (Do you think breast cancer is genetic?) only moderately. This was also surprising because it would be expected that working women and students would know more about the mentioned knowledge. Same process was followed

Table 4: Knowledge-wise MANOVA

	Age	Occupation	Residence
Breast cancer survey			
Knowledge 1	0.000**	0.000**	0.008**
Knowledge 2	0.050*	0.000**	0.000**
Knowledge 3	0.000**	0.000**	0.000**
Knowledge 4	0.000**	0.000**	0.000**
Knowledge 5	0.001**	0.000**	0.000**
Knowledge 6	0.026**	0.000**	0.000**
Knowledge 7	0.004**	0.077	0.000**
Knowledge 8	0.005**	0.000**	0.000**
Knowledge 9	0.210	0.000**	0.000**
Knowledge 10	0.000**	0.000**	0.000**
Knowledge 11	0.000**	0.000**	0.000**
Knowledge 12	0.002**	0.004**	0.213
Knowledge 13	0.374	0.535	0.586
Knowledge 14	0.136	0.385	0.460
Cervical cancer survey			
Knowledge 1	0.000**	0.000**	0.000**
Knowledge 2	0.000**	0.000**	0.000**
Knowledge 3	0.002**	0.000**	0.000**
Knowledge 4	0.167	0.012**	0.007**
Knowledge 5	0.182	0.260	0.135
Knowledge 6	—	—	—
Knowledge 7	0.323	0.223	0.369

*p = 5% level of significance.
**p = 1% level of significance.

Table 5: Result of post hoc Duncan test

	Age			Occupation		
	Subset 1	Subset 2	Subset 3	Subset 1	Subset 2	Subset 3
Breast cancer survey						
Knowledge 1	A2,A3,A4	A1		H,W	S	
Knowledge 2	A1,A3	A3,A2,A4		H,S	W	
Knowledge 3	A2,A1,A3	A4		H,S	W	
Knowledge 4	A1,A3,A2	A4		H	S	W
Knowledge 5	A1,A3	A3,A4	A4,A2	H	S	W
Knowledge 6	A3,A1	A1,A4,A2		H	W,S	
Knowledge 7	A1,A3	A3,A2	A2,A4	H,W,S		
Knowledge 8	A1,A2,A3	A4		H	S	W
Knowledge 9	A3,A1,A2,A4			H	S	W
Knowledge 10	A1,A2	A2,A3	A4	H,S	W	
Knowledge 11	A1,A2,A3	A4		H	S	W
Knowledge 12	A3,A4,A2	A1		W,H	S	
Knowledge 13	A4,A3,A2,A1			H,S,W		
Knowledge 14	A3,A4,A1,A2			W,S,H		
Cervical cancer survey						
Knowledge 1	A4,A3	A1,A2		H	W	S
Knowledge 2	A4,A3,A1	A2		H	W	S
Knowledge 3	A4,A3,A2	A3,A2		H,W	W,S	
Knowledge 4	A4,A3,A1,A2			H,S	S,W	
Knowledge 5	A2,A4,A1,A3			S,H,W		
Knowledge 6						
Knowledge 7	A1,A3,A4,A3			H,S,W		

A1, A2, A3, A4, age groups 18–25, 26–35, 36–45, and above 45 years, respectively; H, W, S, occupation group housewives, working women, and students, respectively.

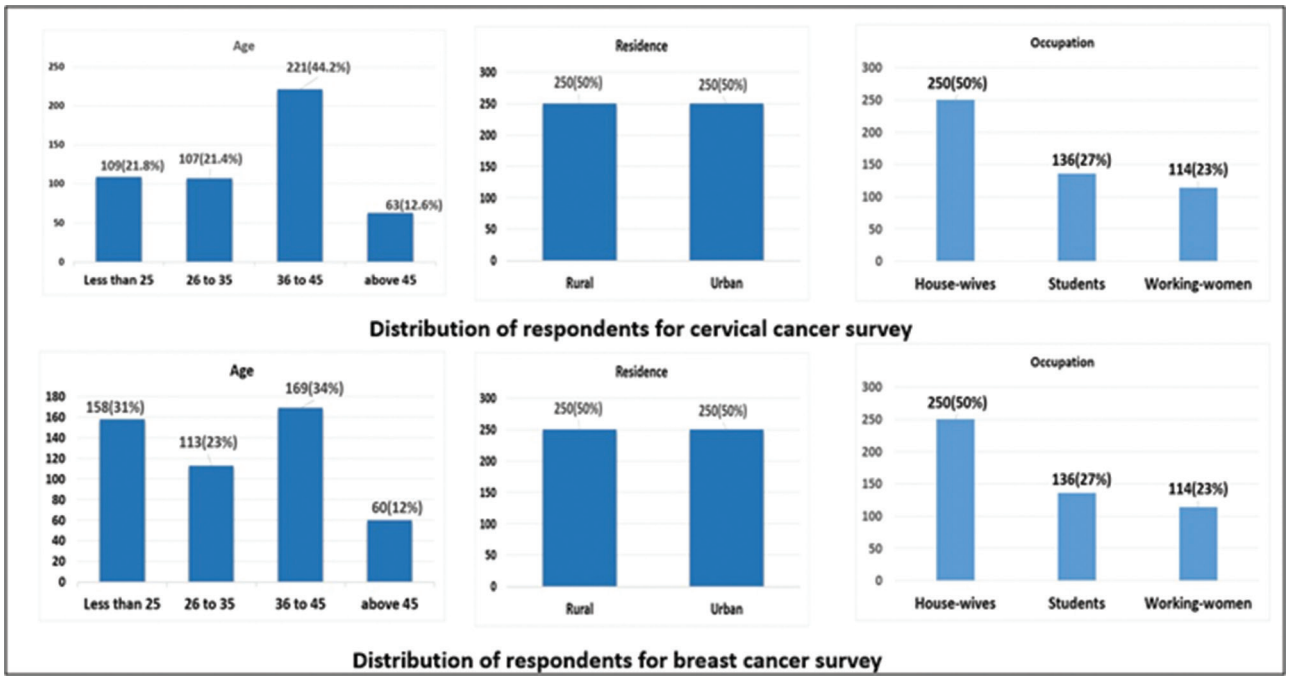

Figure 1: Distribution of participants for the survey.

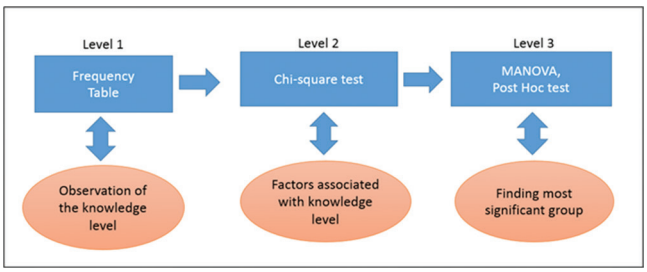

Figure 2: Hierarchical study design.

for cervical cancer survey. In case of cervical cancer, age was not found to significantly influence all the questions except knowledge 4 (Do you what is Pap test?), knowledge 5 (Do you ever done pap smear test?), and knowledge 7 (Have you heard about any government scheme for prevailing awareness of cervical cancer?). Here, it was observed that none of the three independent factors—age, occupation, and residence—influenced knowledge 5 and 6 (Have you attended pap smear test of your own; do you know the importance of routine pap smear test?) and 7. Knowledge 4 was highly moderately influenced by residence factor, as expected because women of urban area may have been exposed to health camps or advertisements or may have understood it more than their rural counterpart, and they also did not hesitate to answer questions. Age did not influence this knowledge, but occupation showed a high influence as expected. As knowledge about Pap test was so modest, it was not surprising that the responses for the next three questions were practically nil.

Further analysis was performed using post hoc (Duncan) test [Table 5] to study which subgroups influenced the knowledge level in which order. Post hoc Duncan test can be performed for factors with more than two groups. So, only factors age and occupation were analyzed for the study. Table 4 shows the results of post hoc (Duncan) test. As an example, age groups 26–35, 36–45, and above 45 years revealed the least influence on knowledge 1 of breast cancer survey, which was significantly less or different from age group 18–25 years. In addition, students showed significant influence on knowledge 1, which was more significant than those by housewives and working women group. Even inside a particular subset, parameters were arranged in the increasing order of impact on the given knowledge. This test results can give a clear picture of how the dependent factors are affecting the knowledge.

Oza et al.[11] performed a study on nursing staff, which included 250 nurses in a civil hospital, Ahmedabad, Gujarat, India. They found that 74% nurses knew that early detection of breast cancer is possible. Similar study was carried out by Ahuja et al.[15] on 80 women in a medical college of Mumbai India. They found that 52% in the group was aware of the particular cancer even though 95% claimed to have heard of the disease. Cervical cancer based survey was done by Donta et al.[4] on 1958 married women from age group 18 to 49 years and found that 37.7% were aware of cervical cancer. Shah et al.[5] and Thakur et al.[16] investigated the risk factors of cervical cancer.

Data considered for the survey represent rural and urban women of the regions including other two significant factors, namely, age and occupation of the women participants.

Moreover, a hierarchical study was attempted so that the most affected group can be detected using efficient statistical tests. Although the study considered a limited sample size, it will be beneficial to plan studies to be carried out with larger sample size and by using broad questionnaires.

Conclusion

This study clearly revealed the knowledge of breast cancer and cervical cancer among common women was very poor and influenced by different factors as mentioned earlier. This study clearly showed that, to reduce the mortality rate from these two types of cancers, the awareness level in the society has to be improved through different initiatives such as awareness camps and by educating the common women. In a country like India, where cultural believes and poor are high in society, knowledge has to be improved at a large scale; otherwise, women may not intent to participate in the early diagnostic screenings such as Pap smear test for cervical cancer and mammogram for breast cancer. Regular awareness camps are required to spread knowledge. No matter whatever advanced screening techniques are available, the mortality rate cannot be reduced unless basic knowledge and awareness are improved.

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Appendix

Pro Forma I: Breast Cancer Survey

Part A

1. Name:
2. Select age group: (A1) 18–25, (A2) 26–35, (A3) 36–45, (A4) above 45
3. Select occupation: (H) Housewife, (S) Student, (W) Working women
4. Select place of residence: (R) Rural, (U) Urban

Part B: General knowledge related to breast cancer

1. Knowledge 1: Do you know what breast cancer is?
2. Knowledge 2: Do you feel that early detection can reduce mortality rate?
3. Knowledge 3: Would like to go for screening test if cost involved is not an issue?
4. Knowledge 4: In general at what age do you think a woman should start having routine mammogram?
5. Knowledge 5: Do you think that age is one of the risk factors of breast cancer?
6. Knowledge 6: Do you think smoking and drinking can cause breast cancer?
7. Knowledge 7: Do you think breast cancer is genetic?
8. Knowledge 8: If one of your friend or relative has breast cancer, do you think that you will also suffer from the same?
9. Knowledge 9: Do you think giving birth after age of 30 increase breast cancer?
10. Knowledge 10: Do you think that women who went through menopause after the age of 55 have high risk of suffering from breast cancer?
11. Knowledge 11: Do you know what the prediagnostic tests available for breast cancer are?
12. Knowledge 12: Do you know about the risk factors of breast cancer?
13. Knowledge 13: Have you ever done any prediagnostic test?
14. Knowledge 14: Do you know about any government scheme for awareness?

Pro Forma II: Cervical Cancer Survey

Part A

1. Name:
2. Select age group: (A1) 18–25, (A2) 26–35, (A3) 36–45, (A4) above 45
3. Select occupation: (H) Housewife, (S) Student, (W) Working women
4. Select place of residence: (R) Rural, (U) Urban

Part B: General knowledge related to cervical cancer

1. Knowledge 1: Do you know about cervical cancer?
2. Knowledge 2: Do you know about the risk factors of cervical cancer?
3. Knowledge 3: Do you know about any early diagnostic technique for cervical cancer?
4. Knowledge 4: Do you what is Pap test?
5. Knowledge 5: Have you ever done Pap smear test?
6. Knowledge 6: Have you attended Pap smear test of your own; do you know the importance of routine Pap smear test?
7. Knowledge 7: Have you heard about any government scheme for prevailing awareness of cervical cancer?