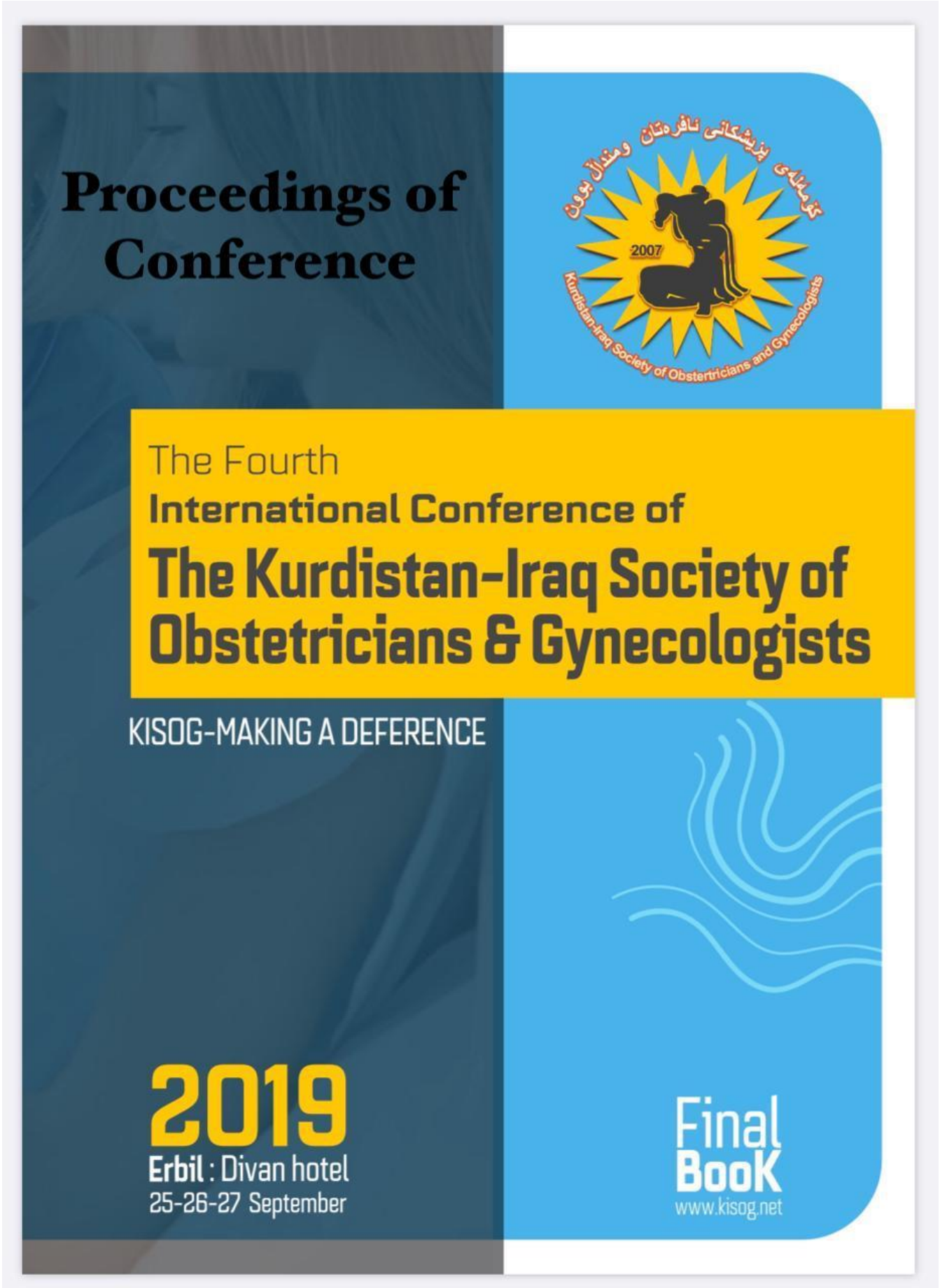
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Knowledge, Attitudes and Behaviors of women regarding breast and cervical cancer in Suleimani city

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Abstract

Background and objectives: Breast and cervical cancer are the most frequent type of cancer among women globally. Favorable outcome and prognosis are likely if the cancer is detected early stage. Our aim is to evaluate knowledge, attitudes, and practices regarding breast and cervical cancer as well as their screening methods used amongst females living in Suleimani city.
Methods: Across-sectional survey of women aged 20-60 years, health care worker and non- health care worker are involved in this study using a detailed questionnaire. A three section questionnaire used, in which sociodemographic data, questions on knowledge, attitudes, and practice of breast and cervical cancer were assessed. **Results:** A total 416 women were included in this study. The average age was 38± 10.25 years. We found that 25.5% and 15.9% of females had done breast self-exam and mammography respectively. Furthermore, 33.3% reported the reason for not doing breast self-exam was that they did not know how to do it. The knowledge (23.3%), positive attitude (56%) toward cervical cancer and practicing of Papanicolaou smear (10.8%) were low. Healthcare worker had more chance of performing Pap smear examination (16.5% vs 9.2%). We found that 69% of the respondents claimed that they were not advised by their doctor to have Pap smear. Although 7.5% of women had knowledge about HPV vaccination, 87% of them were willing to take it.
Conclusions: The rate of performing screening tests were low in our study, however, educating community will have positive influences on the outcome.

Keywords: Knowledge, Attitudes, Breast cancer, Cervical cancer, Screening.

Introduction

Breast cancer has been labeled as the most dominant type cancer amongst women on a worldwide scale as mentioned in 2008 by the World Health Organization's (WHO) Report[1].

The highest incidence was recorded in developed countries while in developing countries the prevalence rate is still relatively low which is contributed partially to shorter life span[2].

In 2008, breast cancer led to 7.6 million deaths and more than 12 million new cases were reported by the International Agency for Research on Cancer[3].

Early diagnosis and presentation have resulted in lower breast cancer rates in western countries recently[4]. Favorable outcome and prognosis are likely if the cancer is detected early with a 5-year survival rate of 92%. However, it will decrease to 71% with local invasion; furthermore, it will substantially decrease to as low as 18% when distant metastasis occurs[5].

Mammography cannot prevent breast cancer; however, it can improve outcome through early detection of the cancer significantly increasing the survival rate[6]. Regular breast self-examination (BSE) is another precious way for early diagnosis of breast cancer, and is it recommended as an effective tool for early detection of breast cancer since it is easy, effective and cost free[7].

Cervical cancer is the third most common type of cancer in women[8]. Annually, around 500.000 new cases are recorded on a global scale and 274.000 women die from it[9].

Most of the deaths associated with cervical cancer were recorded in women who had never undergone Papanicolaou (Pap) smear examination[10]. Progression of cervical cancer to advanced stages can be prevented by implementation of screening [11].

The aim of this study was to evaluate knowledge, attitudes, and practices regarding breast and cervical cancer as well as their screening methods used amongst females living in Suleimani city.

Patients and methods

This study is a cross-sectional survey and was conducted amongst women aged 21-57 years, between 1st of January 2019 to 1st of July 2019. Medical staffs including nurses, paramedics as well as midwives and patients referred to the consultation unit of Sulaimani maternity hospital and other medical centers of Sulaimani city were enrolled in the study.

Participants were given a detailed questionnaire after their acceptance in participation. The questionnaire was composed of three sections in which we obtained sociodemographic data of participants in the first section. In the second and third sections, question on knowledge of cervical cancer, attitudes and behaviors towards cervical and breast cancer were asked respectively. Knowledge on cervical cancer and screening were assessed by a 12-point scale. When scored ≥ 50%, the responders were categorized as having adequate knowledge. In addition Five point Likert scale was used to assess attitude which ranged from strongly agree to strongly disagree as well as containing 14 statements (7 were positive and 7 were negative statements). Positive attitude was defined by scoring ≥ 50%. The Practice linked with undergoing Pap smear test regularly was also checked. The Same methods were also used for breast cancer.

Exclusion criteria were when a participant was <20 or >60 years of age or those who were not willing to participate. Statistical Analysis was performed by using IBM SPSS Statistics version 25. Continuous data were given as mean±standard deviation (SD). Categorical data were given as percentage (%).Pearson and Fisher's chi-square tests were also used to analyze the cross tabulations. Furthermore, a P-value of ≤0.05 is considered statistically significant.

Ethical approval was gained from research protocol ethics committee of Kurdistan Board of Medical Specialties.

Results

A total of 416 participants were enrolled in the study. The mean age was 38± 10.25 and 36.5% of participants were university graduates while 14.2% were illiterate. These data together with other sociodemographic characteristics of the participants are shown in Table 1.

Table (1): Sociodemographic characteristics

Variables	No.	%
Age (Y)		
20-39	192	46.2
40-60	224	53.8
Education		
Illiterate	59	14.2
Primary education	80	19.2
High school	125	30
Gradate	152	36.5
Profession		

Health care worker	91	21.9
Governmental employee	96	23.1
House wife	229	55
Marital state		
Married	364	87.5
Single	52	12.5
Smoking status		
Smoker	34	8.2
Non smoker	382	91.8
Age at first child		
No child	69	16.6
15-20	86	20.6
21-30	234	56.2
30-40	27	6.5
Number of children		
No child	69	16.6
1-3	267	64.4
>3	80	19

Although 310 (74.5%) participants had a good knowledge on breast cancer, only 106 (25.5%) of them were doing regular BSE. The number of responders who had adequate knowledge on cervical cancer was 97 (23.3%). There data together with other characteristics and associations between being healthcare worker and other parameters are illustrated in table 2.

Table **(**2**):** Comparison of profession with different respondent's characteristics

Variable		**Total (n=416)**	**Health care Worker (n=91)**	**Non-healthcare worker (n=325)**	**p-value**
Breast cancer knowledge	Yes	310(74.5%)	74(81.3%)	236(72.6%)	0.092
	No	106(25.5%)	17(18.7%)	89(27.4%)	
Doing BSE	Yes	106(25.5%)	11(12.1%)	95(29.2%)	0.001
	No	310(74.5%)	80(78.9%)	230(70.8%)	
Doing breast sonography	Yes	83(20%)	27(29.7%)	56(17.2%)	0.009
	No	333(80%)	64(70.3%)	269(82.8%)	
Doing Mammography	Yes	66(15.9%)	10(11%)	56(17.2%)	0.15
	No	350(84.1%)	81(89%)	269(82.8%)	
Attitude toward breast cancer	+ve	316(76%)	75(82.4%)	241(74.2%)	0.1
	-ve	100(24%)	16(17.6%)	84(25.8%)	
Cervical cancer knowledge	Yes	97(23.3%)	43(47.3%)	54(16.6%)	0.000
	No	319(76.7%)	48(52.7%)	271(83.4%)	
Pap smear awareness	Yes	89(21.4%)	40(44%)	71(21.8%)	0.000
	No	327(78.6%)	51(56%)	254(78.2%)	

Performs pap smear	Yes	45(10.8%)	15(16.5%)	30(9.2%)	0.04
	No	371(89.2%)	76(83.5%)	295(90.8%)	
Attitude toward cervical cancer	Yes	233(56%)	58(63.7%)	175(53.8%)	0.09
	No	183(44%)	33(36.3%)	150(46.2%)	
Knowledge about HPV vaccine	+ve	31(7.5%)	17(18.7%)	14(4.3%)	0.000
	-ve	385(92.5%)	74(81.3%)	385(92.5%)	

Table 3 shows significant association between performing BSE and: marital state, positive family history of breast cancer, breast cancer knowledge, doing breast sonography, doing mammography and being healthcare worker.

Table (4): Comparison of BSE performance with different respondent's characteristics

Variable		**Total (n=416)**	**Performing BSE(n=106)**	**Not Performing BSE(n=310)**	**p-value**
Married	Yes	364(87.5%)	86(81.1%)	278(89.7%)	0.02
Single or divorced	Yes	52(12.5%)	20(18.9%)	32(10.3%)	
Family history of breast cancer	Yes	90(21.6%)	44(41.5%)	46(14.8%)	0.000
	No	326(78.4%)	62(58.5%)	264(85.2%)	
Breast cancer knowledge	Yes	310(74.5%)	104(98.1%)	206(66.5%)	0.000
	No	106(25.5%)	2(1.9 %)	104(33.5%)	
Doing breast sonography	Yes	83(20%)	51(48.1%)	32(10.3%)	0.000
	No	333(80%)	55(51.9%)	278(89.7%)	
Doing mammography	Yes	66(15.9%)	36(34%)	30(9.7%)	0.000
	No	350(84.1%)	70(76%)	280(90.3%)	
Attitude toward breast cancer	+ve	316(76%)	82(77.4%)	234(75.5%)	0.6
	-ve	100(24%)	24(22.6%)	76(24.5%)	
Healthcare worker	Yes	91(21.9%)	11(10.4%)	80(25.8%)	0.001
	No	325(78.1)	95(89.6%)	230(74.2%)	

There were significant associations between undergoing Pap smear test and: cervical cancer knowledge, Pap smear awareness, attitude toward cervical cancer and being healthcare worker as described in table 4.

Table (5): Comparison of Pap smears performance with different respondent's characteristics

Variable		**Total (n=416)**	**undergoes Pap smear (n=45)**	**undergoes Pap smear (n=371)**	**p-value**
Married	Yes	364(87.5%)	39(86.7%)	325(87.6%)	0.8
Single or divorced	Yes	52(12.5%)	6(13.3%)	46(12.4%)	
Cervical cancer knowledge	Yes	97(23.3%)	21(46.7%)	76(20.5%)	0.000
	No	319(76.7%)	24(53.3%)	295(79.5%)	

Pap smear awareness	Yes	89(21.4%)	26(57.8%)	63(17%)	0.000
	No	327(78.6%)	19(42.2%)	308(83%)	
Family history of Cervical cancer	Yes	14(3.4%)	2(4.4%)	12(3.2%)	0.6
	No	402(96.6%)	43(95.6%)	359(96.8%)	
Attitude toward cervical cancer	+ve	233(56%)	41(91.1%)	192(51.8%)	000
	-ve	183(44%)	4(8.9%)	179(48.2%)	
Healthcare worker	Yes	91(21.9%)	15(33.3%)	76(20.5%)	0.04
	No	325(78.1)	30(66.7%)	295(79.5%)	
Knowledge about HPV vaccine	Yes	31(7.5%)	6(13.3%)	25(6.7%)	0.07
	No	385(92.5%)	39(86.7%)	346(93.3%)	

Discussion

It is advisable to refer to author`s name rather than the country

Breast and cervical cancer are the second and fourth leading cancer related to mortality globally[12]. Reducing death and burden of these types of cancer can be achieved with early diagnosis which in turn increases the success rate of treatment[13].

The current study showed that overall 76.7% of the respondents had an average to adequate amount of knowledge on breast cancer and BSE (81.3% in healthcare worker group vs 72.6% in non-health care group); this was relatively close to the results of Hacihasanogˇlu[14], which reported 68.1%, but was lower than a study done in Carelli[15] which reported 86.1%. While in Olowoker**e**[16] 52.7% was reported, these are due to different in population selected in these studies as in Carelli[15] study one third of its population were physician and another one third were medical students.

On the other hand, knowledge about cervical cancer and its prevention was low in the current study, which was 23.3 % (47.3% in healthcare worker group vs 16.6% in non-health care group), this ratio is lower than what is recorded in many studies including in Alsairafi [17] and Gichangi [18] (87% and 51% respectively). Contrarily, it is far higher than those reported in India[19] and Nigeria[20] (7% and 12% respectively). This diversity in the findings could be related to the level of education of populations of different studies, in our study a good proportion was from graduates (36.5%) and 21.9% of them were working in the health care units. The knowledge on cervical cancer in our health care unit was 47.3%, hence this was lower than what is scored in Ertem[21] (63.9%). While it was consistent with Urasa[22] (46%), and higher than rural Shekhar[23] (26.7%). The wide ranges of recorded percentages could be due to differences in types of health care workers involved in these studies, as minority of our health care workers were university graduate nurses, a majority were either mid wife and nurses of institutes.

The results of the present study showed that 70% of participants had a positive attitude about breast cancer which was consistent with the findings of Kalliguddi[24] (72.45) and the positive attitude was also found in 75% of our health care workers which was close to the findings in a study in Danesh[25] (75.8%). On the other hand positive attitude towards cervical cancer was around 56% which was lower than what was recorded in Al-Meer[26] (85.5%). it was also higher than that found in Al Sairafi[17] (30.6%). In our health care worker group, positive attitude was found to be 63.7% which was lower than that of Bahri [27] (87.3%). Although knowledge about HPV vaccination in our study was limited (7.5%), majority of them (87%) were willing to have it.

The evaluation conducted on the performance of our participants showed that overall 25.5% use regular BSE and there was a significance association between family history of breast cancer and performing BSE (p-value<0.001). Additionally, 15.9% of the respondents use mammography irregularly and 20% use ultrasonography but not regularly. While the current study recorded a lower percentage of BSE than what is recorded in Reisi [28] (66.4%) and Okobia[4] (34%), however it is higher than another city of Iran[29] (17.3%). The percentage of BSE was 12.1% for health care group which was lower than that of the non-health care worker group (29.2%) and was far lower than that done in Reisi[28] (42.7), furthermore many studies were showing percentages between 6%-83%[30-33] of practicing BSE. Although it was irregular, mammography was experienced in about 15.9% which was consistent with a study in Seyed[34] (13%). The finding could be due to their awareness of the cancer and fear of finding the disease in themselves.

In the current study, we found that 10.8% of our participants had undergone Pap smear examination as all of them were advised and referred by their doctor, where the chance is higher for health care workers to have it (16.5% vs 9.2% p-value 0.04), furthermore, 69% of the respondents linked the reason of not performing pap smear test to the fact that it was not suggested by their doctors, the same reason were reported in many other studies[35-37]. Our result is comparable to what is found in Hakan[38] (9.4%), Shrestha[39] (10.5%) and as low as 1.8% was also reported in Southeast Nwozor[40]. Higher rates of Pap smear practice were reported in Al Sairafi[17] (23.8%) and in developed countries the rate is around 40%-50%.[41] Although medical staffs are a model sample in population, very low rates of Pap smear examination was found amongst them (16.5%) and comparable rates were found in some studies done in Urasa[22] (15.4%), Tran[42] (13%) and was lower than that of a study carried out in Goyal[43] (20%), Ekine[44] (27.8%), Audu[45] (23.3%), while our rate was higher than those recorded by Shekhar(7%)[23] and Ayinde[46] (6.8%).

Conclusion

The rate of performing screening tests were low in our study, however, stratifies including educating medical staffs, as they have direct contact with the patients, and educating the community through media together with initiation of national screening program will have positive influences on the outcome.

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