The impact of Breastfeeding on Breast Cancer among women in Sulaimani city

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Abstract :

Breastfeeding can reduce the risk for breast cancer. This protective effect seems greater for women who had extended periods of breastfeeding during their lifetime. To find out the impact of breastfeeding with breast cancer among women, a Retrospective case-control study was carried out, from July 2016 to October 2016. Purposive 100 breast cancer cases were compared to 100 women, no family history with breast cancer and marital status, matched hospital-based controls from 20 to 60 years of age married women attending Hiwa Hospital and Medical Emergency Hospital in Sulaimani City. A questionnaire was constructed by the researcher to elicit the detailed information related to study objectives. All subjects were completed as in-person interview technique.

Analyzing and interpreting data using the application of descriptive statistical analysis, inferential chi-square test and a multivariate conditional logistic regression analysis was employed. The results have revealed that there was an association between breast cancer and, level of education, residence area, BMI, abortion, hormonal contraception , long duration contraception use above 6 years , late age at menopause (≥55 year) , benign breast disease , infertility and older age at first pregnancy (≥30 year). The study concludes that breastfeeding was associated significantly with breast cancer in a result of chi square test generally for breastfeeding ($\chi 2$ =13.31, p= 0.00) and particularly ($\chi 2$ =24.79, p= 0.00) for exclusive breastfeeding. Breastfeeding did have an impact on breast cancer, according to the model summary table of regression analysis. The R Square to the present study was 0.53%. This indicates that 53.0% of the variance of breast cancer has been determined in breast feeding.

Key words : Breastfeeding, Breast Cancer, Sulaimani City.

INTRODUCTION:

The female breast has always been a symbol of beauty, fertility and femininity. Cancer is a leading cause of mortality worldwide, responsible for 7.6 million deaths or roughly 13% of all deaths in 2008, 70% of which occurred in low- and middle-income countries. This is predicted to rise to 13.1 million deaths annually by 2030 [28]. Among women, breast cancer is the leading form of disease, accounting for 16% of all female cancers [29]. As a result of this rise, more women are dying today worldwide from breast and cervical cancer than maternal mortality [12]. In Iran, the third main cause of death is cancer. The National Cancer Registry reports from 2003 to 2006, population-based cancer has been applied in this report. Breast cancer is the most common cancer in women worldwide, with nearly 1.7 million new cases diagnosed in 2012 second most common cancer overall. This represents about 12% of all new cancer cases and 25% of all cancers in women [10]. Unfortunately, in the Kurdistan new cases document each year among women, in Hiwa Hospital in Sulaimani, the total number of breast cancer patients from October 2007 till December 2011 were 1456 cases, but from 2012 to December 2015 only after 3 years, this number increased to 1590 cases. Sometimes, patients coming from other cities of Iraq to receive treatment in this hospital.Breast cancer starts when cells in the breast begin to grow out of control. These cells usually form a tumor that can often be seen on an x-ray or felt as a lump. The tumor is malignant, cancerous, if the cells can grow into, invade, surrounding tissues or spread, metastasize, to distant areas of the body. Breast cancer occurs almost entirely in women, but men can get it, too [20]. Breasts consist of several types of tissues, including skin, fat, glandular tissue, and blood vessels. Dense breasts have more glandular, milk-producing, tissues than fatty tissues. Breast cancers can start from different parts of the breast. Most breast cancers begin in the ducts that carry milk to the nipple, ductal cancers; some starts in the glands that make breast milk (lobular cancers). Several factors contribute to increased breast cancer risk, including age, genes, child bearing history, menstrual history, use of hormone therapies, socioeconomic, physical activity, BMI, family history and breastfeeding history [27]. Breastfeeding mothers burn more calories than women who don't breastfeed, so they tend to return to their pre-pregnancy weight more quickly. Studies suggest that breastfeeding may help reduce a woman's risk of breast and ovarian cancer [21, 3]. Exclusive breastfeeding acts as a natural contraception method that is based on evidence as much research has shown, also because of changing hormones during lactation specially decreasing estrogen hormone that reduces the risk of both breast and ovarian cancer. Ovulation suppressed by this natural contraception, in a mother's life, causing less ovulation, low estrogen level and low risk factors to be diagnosed with breast and ovarian cancer [7]. The purpose of the present study is to find out the relationship between the breastfeeding experience which is modifiable behavior and the risk of breast cancer.

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Materials and Methods:

A case-control study was adapted in order to achieve the stated objective. Collection of data took 3 consecutive months starting from the July 1st to October 1st 2016. In order to conduct the study and facilitate the data collection, an official permission was given by the directors of both Hiwa hospital and Medical emergency hospital After accepting this study by the council of the college of nursing/ university of Sulaimani and Participants, target samples, obtained verbal consent. On the other hand, The Sample of the Study (Purposive Sample) of ,100, breast cancer women as case group were selected from Hiwa hospital, and ,100, as control group involves non-cancer patients, were admitted for medical reasons at Medical emergency unit in Sulaimani teaching hospital, both breast cancer and control groups were involved in the sample study. The Control group was closely matched to breast cancer patients in age, no family history with breast cancer and marital status.

Inclusion criteria included: 1. The study samples of both groups must be 20 to 60 years old. 2. Married women. Exclusion criteria included: 1. Family history with breast cancer; first, second and third degree relatives. 2. Women who were previously diagnosed with colon and ovarian cancer to exclude genetic factors BRCA1 and BRCA2 genes. 3. Women who were not willing to participate. 4. Personal history with breast cancer. 5. Previous radiation exposure as treatment for another disease. Women over 60 years of age were excluded during data collection. This decision was due to potential recall bias, mainly in relation to the increase of breast cancer incidence in older age and the duration of breastfeeding among them.On the other hand, data collection techniques when a patient fulfills the study criteria, the data collection process was performed for the period of July 1st to October 1st 2016.

The Interviewing technique (face to face approach) was used by the researcher. Cases and controls interviewed and answered a constructed questionnaire, including sociodemographic, lifestyle factors, reproductive and breastfeeding history. The women's agreement for participation in the present study was obtained and the consent was taken verbally and the interview was carried out individually which took 20 to 30 minutes. The variable BMI was done by the researcher, by calculating weight and height of women, according to WHO, (2004) for the BMI calculation. It is defined as the weight in kilograms divided by the square of the height in meters (kg/m2). The duration of breastfeeding and the duration of exclusive breastfeeding were taken from the women per each child. Instrument Construction 1. Patient chart 2. The Questionnaire was constructed by the researcher for the purpose of the study, mainly to show or to identify the impact of breastfeeding with breast cancer.The final draft of the questionnaire was constructed to include the following parts: Part I: socio-demographic characteristics This part consists of (5) items, concerning the respondents' age, educational level, employment, residential and economic status. Part II: Lifestyle Factors This part consists of 3 items, concerning lifestyle factors like body mass index, cigarette smoking and regular exercise. Part III: Reproductive History This part consists of 11 items, gathering information about reproductive history, including No. of pregnancies, No of Para, No of abortion, age at menarche, age at first pregnancy, age at menopause , Infertility history, types of contraception method, duration of contraception use, benign breast disease and menopausal hormonal therapy(HRT). Part IV: Breastfeeding History.This part consists of 6 items, including breastfeeding, exclusive breastfeeding, lifetime duration of breastfeeding, as general, lifetime duration of exclusive breastfeeding, the number of children breastfed exclusively and beyond 6

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months). The validity of the questionnaire was determined by having it evaluated by 19 experts in the field of then constructed, refined, and agreed with them. Therefore the questionnaire indicated to be valid and proper to measure the variables of the study. As a result, the value of alpha Cronbach equals to 0.792 and the validity was 0.772, then the result of alpha Cronbach and validity shows the highly reliable of the questionnaire. The pilot study was conducted with 20 breast cancer patients attended oncology and out- patient units in Hiwa hospital in Sulaimani Statistical Methods All statistical computation is enhanced using statistical method (SPSS 21). The data had been coded, tabulated, and presented in a descriptive form. The statistical procedure that was applied to determine the results of the present study included:

1- Alpha-cronbach has been used for testing the reliability of the questionnaire.
2- Descriptive statistical data analysis
3-Inferential data analysis: A. Chi square : This test was used to determine the significant association of socio-demographic, lifestyle factors, reproductive history and breastfeeding history with breast cancer among participants at P-value < 0.05. B. Simultaneous Multiple Regression:

The significance level of all statistical procedures was determined at (F test), P<0.000.There are criteria of the probability level of determining the significance of the test: P value as:

1. High significant (P< 0.001)
2. Significant (P< 0.05)
3. Nonsignificant (P> 0.05)
4. Very highly significant (P< 0.000)

Ethical approval from the University of Sulaimani and ethics committee was granted. The study participants informed consent verbally and participated without being included or coxed. They were at liberty to withdraw without being victimized. Permission from the director of the hospital was given and also the unit's in-charges were informed prior to study initiation.

Limitations of the Study:

1. It was difficult for a matching control group with the case group because of exclusion criteria and age groups.
2. Some of the patients were not cooperative.
3. The researcher could not interview patients throughout their giving medications.

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Data Analysis

Table (1): Association between the case & the Control group in relation to Socio- Demographic characteristics

Variables	Items	Case group (N=100)		Control Group (N=100)		Total	Significanc e test
		N	%	n	%		
Age	20 – 29 years	6	6.0	8	8.0	14	χ^2 =3.72 p= 0.29
	30 - 39 years	24	24.0	33	33.0	57	
	40 - 49 years	44	44.0	39	39.0	83	
	50 - 59 years	26	26.0	20	20.0	46	
Education	Illiterate	16	16.0	33	33.0	49	χ^2 =8.31 p= 0.040
	Primary	41	41.0	31	31.0	72	
	Secondary	21	21.0	15	15.0	36	
	Institute-College	22	22.0	21	21.0	43	
Occupation	Housewife	66	66.0	68	68.0	134	χ^2 =3.71 p= 0.44
	Employee	28	28.0	29	29.0	57	
	Retired	2	2.0	1	1.0	3	
	Student	4	4.0	2	2.0	6	
Residence	Rural	1	1.0	5	5.0	6	χ^2 =23.10 p= 0.00
	Urban	51	51.0	78	78.0	129	
	Sub-urban	48	48.0	17	17.0	65	
Economic status	Sufficient	25	25.0	24	24.0	49	χ^2 =0.198 p= 0.90
	Barely sufficient	53	53.0	56	56.0	109	
	Insufficient	22	22.0	20	20.0	42	

Table (1) shows the association between a case & control groups in related to Socio- demographic characteristics. There was no statistically significant difference regarding age p= 0.29, occupation p= 0.44, economic status p=0.90 between the study group and control group.On the other hand, there were statistically significant differences between both groups in Education p=0.040 and Residence area p= 0.00 because the result of p-value was less than the common alpha 0.05. Thus, the sample in the study group was more educated than sample in the control group

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Table (2): Association between the case & the control group in related to some lifestyle factors:

Variables	Items	Case group (N=100)		Control Group (N=100)		Total	Significance test
		N	%	N	%		
BMI	(Underweight) < 18.5	0	0.0	3	3.0	3	χ^2 =14.99 p= 0.002
	(Normal range) 18.5-24.9	11	11.0	29	29.0	40	
	(Over weight) 25-29.9	40	40.0	38	38.0	78	
	(Obese) ≥ 30	49	49.0	30	30.0	79	
Smoking cigarette	Active smoker	1	1.0	1	1.0	2	χ^2 =2.38 p= 0.49
	Passive smoker	36	36.0	29	29.0	65	
	Both active and passive smoker	3	3.0	1	1.0	4	
	Never smoked	60	60.0	69	69.0	129	
Regular exercise	Yes	22	22.0	25	25.0	47	χ^2 =0.25 p= 0.61
	No	78	78.0	75	75.0	153	

Table (2) shows the association between a case & control group in relation to some life style factors, there were no statistically significant differences in Smoking cigarette p=0.49 and regular exercise p=0.61 between the study group and control group.In addition, there were highly statistically significant differences between study group and control group in body mass index p=0.002.In the present study, it has not demonstrated an association between smoking cigarette and breast cancer among women. This was due to a small number of women are smokers in our culture.

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Table (3): Association between the case & the Control group in relation to Reproductive history

Variables	Items	Case group (N=100)		Control Group (N=100)		Total	Significance test
		N	%	N	%		
Age at menarche	< 12	8	8.0	5	5.0	13	χ^2 =0.74 p= 0.39
	≥ 12	92	92.0	95	95.0	187	
(Gravida) previous pregnancies	0	6	6.0	0	0.0	6	χ^2 =8.86 p= 0.11
	1	4	4.0	3	3.0	7	
	2	11	11.0	16	16.0	27	
	3	14	14.0	19	19.0	33	
	4	14	14.0	10	10.0	24	
	≥ 5	51	51.0	52	52.0	103	
Para	0	6	6.0	0	0.0	6	χ^2 =7.75 p= 0.17
	1	7	7.0	5	5.0	12	
	2	17	17.0	22	22.0	39	
	3	18	18.0	19	19.0	37	
	4	16	16.0	13	13.0	29	
	≥ 5	36	36.0	41	41.0	77	
Abortion	Do not have (0)	55	55.0	68	68.0	123	χ^2 =5.78 p= 0.055
	1- 2	23	23.0	18	18.0	41	
	≥ 3	22	22.0	14	14.0	36	
Contraceptive methods	Pills	21	21.0	14	14.0	35	χ^2 =17.16 p= 0.02
	Injection-patch	3	3.0	0	0.0	3	
	IUCD	10	10.0	18	18.0	28	
	Natural	35	35.0	54	54.0	89	
	≥ two hormonal Method	31	31.0	14	14.0	45	
Duration of contraception used	Natural	35	35.0	54	54.0	89	χ^2 =17.83 p= 0.00
	< 1 year	23	23.0	5	5.0	28	
	1- 5 years	18	18.0	12	12.0	30	
	≥ 6	24	24.0	29	29.0	53	
Age at menopause	Menstruate age	80	80.0	78	78.0	158	χ^2 =7.05 p= 0.029
	< 55	20	20.0	14	14.0	34	
	≥ 55	0	0.0	8	8.0	8	
Benign Breast disease	Yes	18	18.0	6	6.0	14	χ^2 =10.01 p= 0.02
	No	82	82.0	94	94.0	186	

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HRT	**Yes**	**4**	**4.0**	**1**	**1.0**	**5**	χ^2 **=1.86** **p= 0.174**
	No	**96**	**96.0**	**99**	**99.0**	**195**	
Infertility history	**Yes (Primary Infertility)**	**6**	**6.0**	**0**	**0.0**	**6**	χ^2 **=7.053** **p= 0.029**
	Secondary infertility	**9**	**9.0**	**2**	**2.0**	**8**	
	No	**85**	**85.0**	**98**	**98.0**	**184**	
Age at first pregnancy	**< 30**	**97**	**97.0**	**90**	**90,0**	**187**	χ^2 **=8.9** **p= 0.011**
	≥ 30	**3**	**3.0**	**10**	**10.0**	**13**	

Table (3) shows the association between study & control group in relation to reproductive history.There were statistically significant differences between both groups in Abortion p=0.055, contraceptive method p=0.02, duration of contraceptive use p=0.00, age at menopause p=0.029, benign breast disease p=0.02, infertility history p=0.029 and age at first pregnancy p=0.011. Finally, there were no statistically significant differences between both groups in relation to Age at menarche p=0.39, Gravida p=0.11, para p=0.17 and HRT use p=0.174.In the present study the role of HRT is not significant with breast cancer because of a small number of menopausal women and their uses of HRT were less. Further research needed to focus on the type of therapy, the way it is taken and when treatment started, because those factors can produce different results.

Table (4): Association between the case & the control group in relation to Breastfeeding history

Variables	Items	Case group (N=100)		Control Group (N=100)		Total	Significance test
Breastfeeding	**Yes**	**85**	**85.0**	**99**	**99.0**	**184**	χ^2 **=13.31** **p= 0.00**
	No	**15**	**15.0**	**1**	**1.0**	**16**	
Number of breastfed children	**Never**	**15**	**15.0**	**1**	**1.0**	**16**	χ^2 **=16.54** **p= 0.005**
	1 child	**7**	**7.0**	**9**	**9.0**	**16**	
	2 children	**20**	**20.0**	**22**	**22.0**	**42**	
	3 children	**22**	**22.0**	**17**	**17.0**	**39**	
	4 children	**13**	**13.0**	**14**	**14.0**	**27**	
	5 children	**8**	**8.0**	**14**	**14.0**	**22**	
	≥ 6	**15**	**15.0**	**23**	**23.0**	**38**	
Breastfeed Exclusively	**Yes**	**46**	**46.0**	**80**	**80.0**	**126**	χ^2 **=24.79** **p= 0.00**
	No	**54**	**54.0**	**20**	**20.0**	**74**	
Total life time breastfed duration	**Never**	**15**	**15.0**	**1**	**1.0**	**16**	χ^2 **=20.9**
	Birth-24 m	**58**	**58.0**	**47**	**47.0**	**105**	
	25-49 m	**22**	**22.0**	**34**	**34.0**	**56**	

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(TBF)	**50-74 m**	**3**	**3.0**	**11**	**11.0**	**14**	**p=0.00**
	≥ 75	**1**	**1.0**	**5**	**5.0**	**6**	
Number of exclusively breastfed children	**0**	**54**	**54.0**	**20**	**20.0**	**74**	
	1	**3**	**3.0**	**10**	**10.0**	**13**	
	2	**10**	**10.0**	**16**	**16.0**	**26**	**χ^2 =29.65 p=0.00**
	3	**9**	**9.0**	**11**	**11.0**	**20**	
	4	**6**	**6.0**	**11**	**11.0**	**17**	
	≥ 5	**18**	**18.0**	**32**	**32.0**	**50**	
Total lifetime exclusive breastfeeding duration (TEBF)	**Never**	**54**	**54.0**	**20**	**20.0**	**74**	
	0-12 months	**17**	**17.0**	**27**	**27.0**	**44**	
	13-24 m	**16**	**16.0**	**23**	**23.0**	**39**	**χ^2 = 18.25 p=0.005**
	25-36 m	**6**	**6.0**	**19**	**19.0**	**25**	
	37-48 m	**5**	**5.0**	**4**	**4.0**	**9**	
	49-60 m	**2**	**2.0**	**5**	**5.0**	**7**	
	≥ 61 m	**0**	**0.0**	**2**	**2.0**	**2**	

Table (4) shows the association between case & the control group in relation to breastfeeding history. There were highly statistically significant differences between both groups in Breastfeeding p=0.00, number of breastfeed children p=0.005 and exclusively breastfeeding p=0.00. Finally, there were highly statistically significant differences in

Total life time breastfed duration (TBF) p=0.00, Number of exclusively breastfed child p=0.00, Total lifetime exclusive breastfed duration (TEBF) p=0.005 between case group and control group.

Table (5): Model summary, simultaneous multiple regression for the relationship between breastfeeding and breast cancer.

Mod el	R	R Square	Adjusted R Square	Change Statistics		
				R Square Change	F Change	Sig. F Change
1	0.728	0.53	0.453	0.53	123.44	0.000

According to the model summary table of regression analysis above, R Square for this study is 0.53%. This indicates that 53.0% of the variance of breast cancer has been explored in breast feeding. In other words, this illustrates that 53.0% of factors affect breast cancer during breastfeeding. Moreover, there was statistically significance by using Anova table (F-test). This means that the method is possible to be used to analyze this data.

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DISCUSSION:

The main purpose of this study is to find out the impact of breastfeeding with breast cancer among women in Iraq/Sulaimani. A major finding of the present study was that breastfeeding significantly reduces the risk of breast cancer and this protective effect was supported by regression analysis, results showed that 53.0% of the variance of breast cancer has been determined in breast feeding. Agree with results of the present study, previous study conclude that the risk of breast cancer in women who had 1-6 months; 7-12 months and more than 12 months of breastfeeding reduces by 71, 97 and 77 percent in comparison those who had never experienced [8]. Similarly to present study [15] estimated that the cumulative incidence of breast cancer in developed countries would be reduced by more than half, from 6.3 to 2.7 per 100 women by age 70, if women had the average number of births and lifetime duration of breast feeding that had been prevalent in developing countries until recently. Reduction in the risk of breast cancer for every 12 months of breastfeeding reveals a clear protective effect [26, 25]. The protective effects of breastfeeding for breast cancer seemed greater for women who had extended duration of breastfeeding during their lifetime (p-value for linear trend: 0.0095) [30].

There was highly statistically significant difference between both groups in total life time breastfed duration (TBF) p=0.00, agree with the present study some researches also showed an association between breast cancer and duration of breastfeeding, a reduction of 66.3% was seen in cases with 12-23 months of breast-feeding and a decrease of nearly 87.4 percent of cases with 24 months or more [13]. The results from A case-control study done by [1] that was conducted in Brazil, total breastfeeding time>24 months associate with decrease the risk of breast cancer (OR=0.258; CI: 0.084-0.787; p=0.017). [26] When women who had ever breastfed their infants were compared with females who had not, breastfeeding was found to be protective (OR of 0.39; 95% CI 0.26-0.59).

Moreover according to educational level and residence area there were statistically significant differences between both groups in education p=0.040 and residence area p= 0.00 Thus, the sample in the case group were more educated than sample in the control group [17] agree with present study, results showed a positive association between a high level of education and breast cancer risk. Breast cancer incidence was significantly higher in urban than in rural regions, [9] support present study.

In addition, there were highly statistically significant differences between case group and control group in body mass index p=0.002 , this findings in agreement with previous studies and researches according to BMI and reproductive life, [18, 24] Analysis included 294 matched pairs. Mean age at diagnosis was 46.7 years.

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The significant association stated between study & control group in relation to reproductive history there were statistically significant differences between both groups in Abortion p=0.055, and age at first pregnancy p=0.011 results support by [23]. [5] summarized that more than 3 abortions, late age at first live birth (over 30 years old), no breastfeeding were among predictive factors. Also significant association stated between groups in contraceptive method p=0.02 and duration of contraceptive use p=0.00, the results of [4] study have shown that the oral contraceptive use was associated with breast cancer. Using contraceptives for more than 16 years (OR=2.3; 95% CI=1.4-3.9) was considered as a predictive factor [19].

In agreement with the present study many studies [31,28,8] stated that reproductive factors associated with prolonged exposure to endogenous estrogens, such as late menopause and late age at first childbirth are among the most important risk factors for breast cancer.

According to the Collaborative reanalysis of individual, [3] showed the data from 47 epidemiological studies in 30 countries, including 50 302 women with breast cancer and 96 973 women without the disease , suggested that childbearing is known to protect against breast cancer, Estimates of the relative risk for breast cancer associated with breastfeeding in parous women were obtained after stratification by fine divisions of age, parity, and women's ages when their first child was born, as well as by menopausal status. The longer women breast feed the more they are protected against breast cancer. Finaly significant association stated according to benign breast disease p=0.02, The relationship between history of benign breast disease and breast malignancy has been determined in [6] study which agrees with the present study.

CONCLUSIONS :

In summary the main conclusions from the study have been achieved:

1. There was an association between education and residence area and breast cancer.

2. Body mass index in the present study is considered as a high significant association between both groups and breast cancer. It means that women with higher BMI had a higher risk to develop breast cancer in their lives.

3. Reported in the present study results that there is an association between both groups about Abortion, contraceptive method, duration of contraceptive use, age at menopause, benign breast disease, infertility history, age at first pregnancy and breast cancer.

4- A major conclusion was that breastfeeding significantly reduces the risk of breast cancer and this protective effect was supported by regression analysis.

5. The most important findings of this study are to show highly statistical significant associations

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with breast cancer between study and control group in breastfeeding, number of breastfed children and exclusively breastfeeding, total lifetime breastfed duration (TBF), number of exclusively breastfed children, total lifetime exclusive breastfed duration (TEBF).

RECOMMENDATIONS:

1. In both antenatal and postnatal clinics in health facilities, there is a great need for health education to explain the importance of breastfeeding to the child for mothers which is demand to sustain the quantity of breast milk production. Mothers need counseling if they doubt their milk is inadequate or if going back to work.

2. Recommendations for the future programs include evaluation of longer pre- and post-natal education programs, to increase parental leave and baby- friendly policies, both in the workplaces and hospitals enhancing a woman's self-efficacy to overcome perceived barriers to breastfeeding.

3. New mothers should get advice in maternity hospitals prior to labor, about the benefits and postures of breastfeeding to initiate breastfeeding during 1 hour after delivery, especially for those who had a cesarean section.

4. Breast cancer can be reduced through community awareness, by implementation of regular physical activity and healthy diets, possibly because it can lead to weight loss and decrease the amount of body fat. Thereby reducing exposure to circulating estrogens produced by fat that could foster the development of the disease and control of, overweight and obesity. This could eventually have an impact on reducing the incidence of breast cancer. Therefore, long term exercise programs as a critical component of a healthy lifestyle should be a high priority for all women.

5. Encourages all women, especially young age, to Breast self-examination BSE or regularly examining breasts each month a few days after period, also each month for menopause women too, Can be an important way to find a breast cancer early, when it's more likely to be treated successfully and it is a critical step that every woman can and should take.

6- A similar study can be done in a different place and cultural setting incorporating factors Like ethnicity, religion, diet and environmental factors that were not dealt with in this research.

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کاریگەری شیرپێدانی سروشتی لەسەر شێرپەنجەی مەمک لە نێوان ژناندا لە شاری سلێمانی

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پوختە:

شیرپێدانی سروشتی ئە توانێت ئەگەری مەترسیەکانی توشبوون بە شێرپەنجەی مەمک کەمبکاتەوە . وادیارە ئەم کاریگەری خۆپاراستنە زیاترە بۆ ئەو ژنانەی کە ماوەی شیرپێدانی سروشتیان زیاتر بووە بەدرێژایی تەمەنیان.

بەمەبەستی دیاریکردنی کاریگەری شیرپێدانی سروشتی لەسەر شێرپەنجەی مەمک لەنێو ژناندا ، توێژینەوەیەکی چەندایەتی بەراوورد ئاسای کۆنترۆڵکردنی حاڵەتەکان ئەنجامدرا کە لە تەممووزی 2016 دەستی پێکردو لە تشرینی یەکەمی 2016 کۆتایی پێهات .

لە توێژینەوەکەدا 100 حاڵەتی دیاریکراو بەراوورد کراوە بە 100 حاڵەتی تر لەنەخۆشەکانی تر کە لە ڕوی باری هاوسەرگیریونەبونی شێرپەنجەی مەمک لە نێو خێزانیاندا کە هاوتەمەنی نەخۆشەکانی شێرپەنجەی مەمک بوون لەنێوان 20 بۆ 60 ساڵیدا کە ئامادەبوون لە هەردوو نەخۆشخانەی هیوا و نەخۆشخانەی فریاگوزاری خێرا لەشاری سلێمانی .

توێژەر هەستا بەڕێکخستنی پرسیارنامە بۆ بەدەستهێنانی زانیاری وورد دەربارەی ئامانجی توێژینەوەکە. هەموویان بەجیا چاوپێکەوتنیان لەگەڵدا کرا بۆ مەبەستی بابەتەکە .

پرسیارنامەکە درا بەلیژنەیەکی پسپۆری کەپێکهاتبوو لە 19 کەس بۆئەوەی لەڕاستی و دروستی بابەتەکە بکۆڵنەوە . ڕاستی و دروستی و ڕادەی متمانەی لەپێوەری کرۆنباخ ئەلفا دیاریکرا لەلیستی پرسیارنامەکەدا .

شیکاری و لێکدانەوەی بابەتەکە بەبەکارهێنانی بەرنامەی شیکاری ئاماری ، دەرخەری تاقیکردنەوەی دووجای کای و تویکاری فرەپێوەری مەرجدار ئەنجامدرا .

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لێکۆڵینەوەکان دەریانخست کە هۆکاری (ئاستی خوێندن ، ناوچەی نیشتەجێبوون ، کێشی لەش ، لەباربردنی منداڵ ، مەنعکەری هۆرمۆنی منداڵبوون ، مەنعی منداڵبوونی درێژخایەن بۆ زیاتر لە 6 ساڵ ، نەخۆشیەکانی مەمک ، منداڵ نەبوون ، یەکەم منداڵ بوون لەسەروو تەمەنی 30 ساڵی وە کەوتنە تەمەنی نائومێدی لە 55 ساڵی و بەرەوسەرەوە) کاردەکەنە سەر نەخۆشی شێرپەنجەی مەمک .

دەرئەنجامی توێژینەوەکە دەریخست کە شیرپێدانی سروشتی بەشێوەیەکی بەرچاو کاردەکاتە سەر شێرپەنجەی مەمک بەپێی تاقیکردنەوەی دووجای کای (χ2 =13.31, p= 0.00) بۆشیردانی تێکەڵ ، وەبەتایبەتی بەئەنجامی (χ2 =24.79, p= 0.00) بۆ شیری دایک بەتەنها .

دەرکەوت کەشیردان کاریگەری ئەرێنی هەیە لەسەر شێرپەنجەی مەمک بەڕێژەی 53% بەپێی پوختەی خشتەی توێکاری کەمبوونەوەی نیشانەکانی نەخۆشیەکە (R Square) بۆ خستنە ڕووی توێژینەوەکە . ئەمە ئەوە دەگەیەنێت کە 53% ی حاڵەتەکانی شێرپەنجەی مەمک پەیوەندیان هەیە بە شیرپێدانی سروشتیەوە.

کلیلە وشەکان: شیرپێدانی سروشتی، شێرپەنجەی مەمک، ڕونکردنەوەی ئاماری، سەرجەمی هاوکۆلکەی پەیوەندی بە دووجایی.

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References:

Collaborative Group on Hormonal Factors in Breast Cancer. (2002). Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50 302 women with breast cancer and 96 973 women without the disease. The lancet, 360(9328), 187-195.

Fairbrother, N., & Stanger-Ross, I. (2010). Reproductive-aged women's knowledge and attitudes regarding infant-feeding practices: An experimental evaluation. Journal of Human Lactation, 26(2), 157-167.

Ferlay, J., Steliarova-Foucher, E., Lortet-Tieulent, J., Rosso, S., Coebergh, J. W. W., Comber, H., ... & Bray, F. (2013). Cancer incidence and mortality patterns in Europe: estimates for 40 countries in 2012. European journal of cancer, 49(6), 1374-1403.

Forouzanfar, M. H., Foreman, K. J., Delossantos, A. M., Lozano, R., Lopez, A. D., Murray, C. J., & Naghavi, M. (2011). Breast and cervical cancer in 187 countries between 1980 and 2010: a systematic analysis. The lancet, 378(9801), 1461-1484.

Gajalakshmi, V., Mathew, A., Brennan, P., Rajan, B., Kanimozhi, V. C., Mathews, A., ... & Boffetta, P. (2009). Breastfeeding and breast cancer risk in India: A multicenter case-control study. International journal of cancer, 125(3), 662-665.

Jerônimo, A. F. D. A., Freitas, Â. G. Q., & Weller, M. (2017). Risk factors of breast cancer and knowledge about the disease: an integrative revision of Latin American studies. Ciencia & saude coletiva, 22, 135-149.

Joukar, F., Ahmadnia, Z., Atrkar-Roushan, Z., Hasavari, F., & Rahimi, A. (2016). The investigation of risk factors impacting breast cancer in Guilan Province. Asian Pacific journal of cancer prevention: APJCP, 17(10), 4623.

Lewis, S., Heitkemper, M.M. and Dirksen, S.R.,(2000). Text book of medical surgical assessment and

management of clinical problem. New York: Mosby.

Lord, S. J., Bernstein, L., Johnson, K. A., Malone, K. E., McDonald, J. A., Marchbanks, P. A., ... & Burkman, R. T. (2008). Breast cancer risk and hormone receptor status in older women by parity, age of first birth, and breastfeeding: a case-control study. Cancer Epidemiology and Prevention Biomarkers, 17(7), 1723-1730.

Mandal, A. (2013). History of breast cancer. News Medical , 1, pp.1-2.

Nguyen, J., Le, Q. H., Duong, B. H., Sun, P., Pham, H. T., Ta, V. T., ... & Ginsburg, O. (2016). A matched case-control study of risk factors for breast cancer risk in Vietnam. International journal of breast cancer, 2016.

Tamimi, R. M., Spiegelman, D., Smith-Warner, S. A., Wang, M., Pazaris, M., Willett, W. C., ... & Hunter, D. J. (2016). Population attributable risk of modifiable and nonmodifiable breast cancer risk factors in postmenopausal breast cancer. American journal of epidemiology, 184(12), 884-893.

WHO, U. (2012). UNFPA, The World Bank. Trends in maternal mortality: 1990 to 2010. World Health Organization, UNICEF, UNFPA, and The World Bank.

World Health Organization. (2008). Cancer Control: Knowledge Into Action: WHO Guide for Effective Programmes. Policy and advocacy. Module 6 (Vol. 6). World Health Organization.