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PARITY , BREAST FEEDING PRACTICES, AND AGE ASSOCIATION IN WOMEN PRESENTING WITH BREAST CANCER AT A TERTIARY CARE HOSPITAL

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ABSTRACT

Objective: Study was aimed to analyzes the association between age, parity and sociodemographic factors with the incidence of breast cancer in woman at the surgical ward LUMHS Jamshoro, Pakistan.

Background: Breast cancer is amongst the most common cancers in women all over the world, the problem is of similar magnitude in Pakistan too. To date, there has been no any single identified cause of the condition, however, studies have shown the relationship of several risk factors. Out of the many risk factors leading to breast cancer, Parity has also shown considerable association.

Materials and Methods: In this cross sectional study, 137 female with breast cancer were included using a total population sampling technique at surgical department of civil hospital Jamshoro, Pakistan from Jan 2023 to June 2023. All the females included in the studied were suspected cases of breast cancer. The data regarding parity and breastfeeding practices was acquired from patient's history. All the data was entered and analyzed using SPSS version 26.0.

Results: Most of the study participants were aged more than 60 years (40.88%), followed by participants aged between 41– 60 and 18-40 years as 19.93% and 20.44% respectively. The Chi

Square test of association reveals that age, parity, late marriage were significantly associated with the breast cancer with p value 0.04, 0.01 and 0.03 respectively.
Conclusion: In breast cancer patients at surgical department LUMHS Jamshoro, the frequency of breast cancer was significantly associated with age, parity and late marriage with p value less than 5%. However, differences in frequency of breast cancer based on type of residence and socioeconomic class were statistically insignificant
Keywords: Breast cancer, age, parity, association

INTRODUCTION

Breast cancer is the most common malignant tumor among women and has been increasing in incidence for young women in the United States over time[1]. Breast cancer is amongst the most common cancers in women all over the world, the problem is of similar magnitude in Pakistan too. To date, there has been no any single identified cause of the condition, however, studies have shown the relationship of several risk factors. In order to spread awareness among people regarding the breast cancer, the month of October is celebrated as breast cancer awareness month every year around the world. Globally, 1.38 million women develop breast cancer and reportedly 458000 can't win the life fighting against this cancer [2]. Though different number are reported based on country, race and demographic variations, however, breast cancer was reported to the most common cancer in Indonesia, one the populated countries on the globe. With a.7 million incidence every year, the breast cancer became the 2nd most common cancer worldwide by year 2012 [3-5].Even though the actual cause of breast cancer is still under the curtain, the scientists have only been able to relate it with certain risk factors, parity is one those factors. Parity is defined as the number of children born to a women after 24 weeks gestation [6,7]. Unlike cervical cancer in which the higher parity can increase odds of cancer, the studies have reported that increase in umber of children decreases the chances of breast cancer [8,9]. Women having at least three children have 30% lesser odds of developing Ca breast compared to women who don't have children [10,11]. In present study, we evaluated the association of age, parity and sociodemographic factors with the incidence of breast cancer at surgical department of LUMHs Jamshoro Pakistan

MATERIALS AND METHODS:

In this cross sectional study, 137 female with breast cancer were included using a total population sampling technique at surgical department of civil hospital Jamshoro, Pakistan from Jan 2023 to June 2023. All the females included in the studied were suspected cases of breast cancer based on examination findings and histopathological examination reports. The data regarding parity and breastfeeding practices was acquired from patient's history. Suspected cases

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of the breast cancer were evaluated for the histopathological examination. Upon the reports obtained from histopathological report, association of age, parity and breast feeding practice was analyzed. All the data was entered and analyzed using SPSS version 26.0. Categorical variables were reported in frequency and percentage, however, numerical variables were reported in mean and standard deviation. Chi Square test of association was employed to evaluate the association between dependent and independent variables. P value less than 5 % was considered to be significant.

RESULTS

In the present study, most of the study participants were aged more than 60 years (40.88%), followed by participants aged between 41– 60 and 18-40 years as 19.93% and 20.44% respectively. More than half 75 (54.74%) of the patients reported to have no child , 21.17% patients had 1-2 children , 14.6% reported to have 3-4 children while 9.49% patients had more than 4 children. Most of the patients 44.53% belonged to low socioeconomic class followed by average socioeconomic class (38.69%). Nearly half 48.9% of the patients were married after the age of 25 years, 45(32.8%) married during the age bracket 18 to 25 and 25 (18.2%) married before 18 years of age. Most of the patients 90 (65.69%) reported to have urban residence.

Table I Socio-Demographic Factors and Study Characteristics of the Participants

Study Characteristics	n	%
Aged (years)		
Below 18	12	8.76
18 – 40	28	20.44
41 – 60	41	29.93
above 60	56	40.88
Parity		
0	75	54.74
1 to 2	29	21.17
3 to 4	20	14.60
more than 4	13	9.49
Socioeconomic Status		
Low	61	44.53

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Average	53	38.69
High	23	16.79
Age at Marriage		
Below 18	25	18.24818
18 to 25	45	32.84672
more than 25	67	48.90511
Residence		
Urban	90	65.69
Rural	47	34.31

The Chi Square test of association reveals that age was significantly associated with the breast cancer with p value less 0.05 as highest proportion (49.65%) of the breast cancer patients was aged above 60 years and there was no any patient in age group less than 18 years. Parity was also significantly associated with breast cancer with p value 0.01 as the women with no children showed highest proportion 52.25%. Late marriage was also significantly associated with breast cancer with p value 0.03 as since 63 (56.76%) patients marrying after 25 years had breast cancer. Table II

Table II Chi Square Association of the Breast Cancer with Age, Parity and Sociodemographic Factors

Subject Characteristic	**Histopathologic Findings**				p-value
	Positive (n=111)		**Negative (n=26)**		
	N	**%**	**n**	**%**	
Age (years)					
Below 18	0	0.00	12	46.15	
18 – 40	21	18.92	7	26.92	
41 – 60	36	32.43	5	19.23	
above 60	54	48.65	2	7.69	0.04
Parity					
0	58	52.25	17	65.38	
1 to 2	15	13.51	14	53.85	
3 to 4	7	6.31	13	50.00	0.01

more than 4	4	3.60	9	34.62	
Socioeconomic Status					
Low	56	50.45	5	19.23	
Average	44	39.64	9	34.62	
High	11	9.91	12	46.15	0.12
Age at Marriage					
Below 18	13	11.71	12	46.15	
18 to 25	35	31.53	10	38.46	
more than 25	63	56.76	4	15.38	0.03
Residence					
Urban	72	64.86	18	69.23	
Rural	39	35.14	8	30.77	0.23

DISCUSSION

Similar to the worldwide prevalence of the breast cancer in women, it is also increasingly reported in most of the regions of Pakistan [11,12]. As the number of new instances of breast cancer rises, attempts to combat the illness become increasingly essential. Many variables, including hormones, DNA, and the environment, may have a role in the development of breast cancer during a patient's lifetime. According to research, Pakistani women have the highest incidence of breast cancer in Asia [12,13]. Although the risk factors for breast cancer vary greatly and are not confined to reproductive variables, the ageing population and decreasing reproduction rates indicate that women play a key role in the occurrence of breast cancer [14,15].

In the present study, most of the study participants were aged more than 60 years (40.88%), followed by participants aged between 41– 60 and 18-40 years as 19.93% and 20.44% respectively. Our study revealed that the parity was significantly associated with breast cancer with p value 0.01 as the women with no children showed highest proportion 52.25%. In line with our findings, Ardiana et al reported a link between Ca breast and parity [16]. The nulliparous women have never experienced a complete term of gestation(≥ 36 weeks), whereas, It has been observed that during the pregnancy when the menstruation cycle is paused, there is decrease in estrogen exposure which in turn decreases the odds of breast cancer [17-20]. Several studies have reported the link between parity and Ca breast, in addition, the parity is associated with age and subtypes of breast cancer [21,22]

In the present study, the Chi Square test of association reveals that age was significantly associated with the breast cancer with p value less 0.05 as highest proportion (49.65%) of the breast cancer patients was aged above 60 years. In line with our results a study has reported the association between age and breast cancer subtypes [23]. Similar to our study findings, a study among Japanese women reported that younger age and BMI were inversely related to high mammographic breast density [24].Late marriage was also significantly associated with breast cancer with p value 0.03 as since 63 (56.76%) patients marrying after 25 years had breast cancer. Consistent with our findings ,Balasubramaniam et al., Reportedly women marrying after 21years may have 2.5 times higher odds of developing the cancer [14]. A study in Malaysia documented that increased parity decreases the risk of Ca breast [24,25]. The risk decreases drastically after ≥ 3 live deliveries [25]

CONCLUSION

In breast cancer patients at surgical department LUMHS Jamshoro, the frequency of breast cancer was significantly associated with age, parity and late marriage with p value less than 5%. Women with no children, women marrying late after 25 years and women aged above 60 years had high frequency of breast cancer. However, differences in frequency of breast cancer based on type of residence and socioeconomic class were statistically insignificant.

CONFLICT OF INTEREST

The authors declared no any conflict of interest

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AUTHORS CONTRIBUTION

A collected the data, B, C and D drafted the manuscript, E analyzed the data on SPSS and compiled the results, F and G critically reviewed the manuscript.

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