A Study to Analyse the Risk Factors Associated with Development of Cancer of Breast among Patients with Cancer at Siddhanta Red Cross Hospital Bhopal, Madhya Pradesh

Mr. Gaurav Mukerji[1], Dr. Prof. Victor Devasirvadam[2]

[1]Associate Professor, [2]Principal,
[1,2]L. N. Nursing College, L.N.C.T. University, Bhopal, Madhya Pradesh, India

ABSTRACT

The present study has been undertaken to add evidence-based information in the field of breast cancer to analyze the risk factors associated with development of those cancers in the Siddhanta Red Cross hospital Bhopal, Madhya Pradesh.

The study aimed to describe the development of a risk scoring system for identifying a high risk group of women associated with increased risk of development of disease. The selection of sample was done by using convenient non probability sampling technique.

The total sample size for the study was 15 breast cancer patients included in the study. After identifying the risk factors associate with the development of a disease, it may be possible to rank them or give scores. It has been indicated that risk related intervention is more efficient than uniform allocation of resources, with potential benefit increasing with the discriminatory power of the risk scores. However, no such attempts have been made in India for assessing the exact risk factor associated with breast cancer.

Based on the evidence from the collected data it was revealed that the risk factor associated with the formation of breast cancer are family history of breast cancer, late age of pregnancy, not delivered any baby, not fed with breast, not married, consumption of non-vegetarian, personal habits of alcohol/smoking/tobacco consumption, not had the regular pattern of exercise and body mass index of overweight or obesity.

KEYWORDS: Pilot Study, Risk Factor, Cancer of Breast

OBJECTIVES

1. Identify the risk factors of breast cancer among patients with breast cancer.

HYPOTHESIS

H1: There will be a significant association between the risk factors and development of breast cancer.

Material and method
Research approach and design
Research approach

Quantitative approach

Research design

The research design selected for this study is exploratory survey design. According to wood exploratory survey design is used to search for accurate information about the characteristics of particular subjects groups.

Setting of the study

The study was conducted in Siddhanta Red Cross hospital Bhopal.

Sample & Sample Size

Subjects who were met the inclusion criteria at Siddhanta Red Cross hospital were sample of the present study. The total sample size was 15patients with the cancer of breast at Siddhanta Red Cross hospital, Bhopal.

Sampling Criteria

The sampling frame is structured by the researcher. The criteria used for selection of study subjects included the patients;

1. Admitted in Siddhanta Red Cross hospital, Bhopal.
2. Who had diagnosed to have breast cancer.
3. Irrespective of stages of cancer.

Ethical permission

The legal and ethical permissions was obtain from the LNCT University and Siddhanta Red Cross hospital Ethical committee before the data collection. Anonymity confidentiality, and informed consent from the sample.

Data analysis and interpretations

Data collected from 15 breast cancer patients to analyze the risk factors associated with breast cancer of Siddhanta Red Cross hospital Bhopal. The baseline characteristics of the study subjects were analyzed using descriptive and were presented in terms of frequency and percentage as shown in table 1

Table 1:- Frequency and percentage wise distribution of samples
N=15

SL.NO	Demographic Characteristics	FREQUENCY	PERCENTAGE
1.	**Age in year**		
a.	<= 45 years	02	13.3
b.	>45	13	86.7
2.	**Religion**		
a.	Hindu	04	26.7
b.	Muslim	05	33
c.	Christian	03	20
d.	Jains	03	20
e.	Others		
3.	**Education**		
a.	Non formal education	03	20
b.	High school	02	13.3
c.	Graduate and above	10	66.7
4.	**Marital status**		
a.	Married/ widow/ separated	09	60
b.	Single	06	40
5.	**Monthly Income of the family (In Rs.)**		
a.	< = 10,000	05	33.3
b.	>10000	10	66.7
6.	**Residence**		
a.	Rural	03	20
b.	Urban	12	80

TABLE2: Risk factor associated with family history of breast cancer and formation of breast cancer

Demographic Characteristics	Family History of cancer		Risk factor
	yes	No	
Occupation			
Home maker	3	1	Home maker (1.500)
Private job	3	4	
Government Job	1	2	
Residence			
Rural	1	2	Urban (1.500)
Urban	6	6	

Based on family history of breast cancer it was found out that along with family history if the participant are home makers, residing in urban areas they are at risk for developing breast cancer.

TABLE3: Risk factor associated with age of pregnancy and formation of breast cancer

Demographic Characteristics	Age of pregnancy				Risk factor
	Below 20 yr	21-35 year	Above 35	Not become pregnant	
Marital status					Single (4.50)
Married/ widow/ separated	5	2	1	1	
Single	0	0	0	6	
Residence					Urban (1.750)
Rural	2	0	0	1	
Urban	3	2	1	6	

Based on the finding of relative risk it was revealed that if the female had delay history of pregnancy risk factor associated with it are status of being single and residing in urban areas.

TABLE4: Risk factor associated with number of live birth and formation of breast cancer

Demographic Characteristics	Number of live birth		Risk factor
	0	1 or more	
Marital status			Single (4.50)
Married/ widow/ separated	2	7	
Single	6	0	
Residence			Urban (1.750)
Rural	1	2	
Urban	7	5	

Based on the finding of relative risk it was revealed that if the female do not have the history of delivered a baby the risk factor associated with it are the status of being single and residing in urban areas.

TABLE5: Risk factor associated with duration of breast feeding and formation of breast cancer

Demographic Characteristics	Duration of breast fed			Risk factor
	Not fed	1 to 48 month	48 and above	
Marital status				Single (2.250)
Married/ widow/ separated	2	2	5	
Single	6	0	0	
Residence				Urban (2.250)
Rural	1	0	2	
Urban	7	2	3	

Based on the finding of relative risk it was revealed that if the female had less than 48 months of breast fed or no breast fed history risk factor associated with it are status of being single and residing in urban areas.

TABLE 6: Risk factor associated with dietary habits and formation of breast cancer

Demographic Characteristics	Dietary habits		Risk factor
	vegetarian	Non vegetarian	
Religion			Muslim (2.667)
Hindu	3	1	
Muslim	1	4	
Christian	1	2	
Jains	3	0	
Others	0	0	
Education			Graduate and Above (1.500)
Non formal education	1	2	
High school	1	1	
Graduate and above	6	4	
Residence			Urban (1.500)
Rural	2	1	
Urban	6	6	

Based on the finding of relative risk it was revealed that if the female had dietary habits of non-vegetarian risk factor associated with it are belong to Muslim religion, graduate and above, residing in urban areas.

TABLE 7: Risk factor associated with personal habits and formation of breast cancer

Demographic Characteristics	Personal habits		Risk factor
	vegetarian	Non vegetarian	
Monthly Income of the family (In Rs.)			<10000 (3.500)
< = 10,000	1	4	
>10000	7	3	
Residence			Urban (1.500)
Rural	2	1	
Urban	6	6	

Based on the finding of relative risk it was revealed that if the female had the habit of alcohol/ smoking/ tobacco chewing risk factor associated with it is income less than 10,000 Rs per month, residing in Urban areas.

TABLE8: Risk factor associated with exercise pattern and formation of breast cancer

Demographic Characteristics	Exercise pattern		Risk factor
	doing	Not doing	
Education			Graduate (1.500)
Non formal education	2	1	
High school	0	2	
Graduate and above	1	9	
Occupation			Private/ government job (1.500)
Home maker	2	3	
Private job	0	7	
Government Job	1	2	

Based on the finding of relative risk it was revealed that if the female does not have the exercise pattern risk factor associated with it are graduation and above education, doing private/ government job.

TABLE9: Risk factor associated with body mass index and formation of breast cancer

Demographic Characteristics	Body mass index		Risk factor
	Normal	Over weight	
Education			Graduate (4.500)
Non formal education	2	1	
High school	2	0	
Graduate and above	1	9	
Occupation			Private/ government job (4.50)
Home maker	4	1	
Private job	0	7	
Government Job	1	2	
Residence			Urban (2.500)
Rural	2	1	
Urban	3	9	

Based on the finding of relative risk it was revealed that if the female had obese or over weight body pattern risk factor associated with it are graduation and above education, doing private/ government job, residing in urban areas.

Conclusion: -

Based on the evidence from the collected data it was revealed that the risk factor associated with the formation of breast cancer are family history of breast cancer, late age of pregnancy, not delivered any baby, not fed with breast, not married, consumption of non- vegetarian, personal habits of alcohol/smoking/tobacco consumption, not had the regular pattern of exercise and body mass index of overweight or obesity.

References:-

[1] Nainakshi Kashyap, Nadiya Krishnan, Sukhpal Kaur, Sandhya Ghai Risk Factors of Cervical Cancer: A Case-Control Study Asia Pac J Oncol Nurs. 2019 Jul-Sep; 6(3): 308–314.

[2] Mhaske M, Jawadekar SJ, Saundale SG. Study of association of some risk factors & cervical dysplasia/cancer among rural women. *Natl J Commun Med.* 2011;2:209–12.

[3] Aswathy Sreedevi, Reshma Javed, Avani Dinesh, Epidemiology of cervical cancer with special focus on India Published online 2015 Apr 16 Int J Womens Health. 2015; 7: 405–414.

[4] Kour P, lal M, Panjaliya R, Dogra V, Gupta S. Study of the Risk Factors Associated with Cervical Cancer. Biomed Pharmacol J 2010; 3(1). Available from: http://biomedpharmajournal.org/?p=1350