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## RESEARCH ARTICLE

### A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE REGARDING BREAST CANCER AND ITS PREVENTION AMONG COLLEGE GIRLS STUDYING IN SELECTED COLLEGE AT PUDUCHERRY

\*Dr. Prof. P. Genesta Mary Gysel

M.Sc. Nursing, Ph. D, Principal, Sabari College of Nursing

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##### \*Corresponding Author:

Eng. George MB Kaggiah, PhD.

#### ABSTRACT

**Background:** Breast cancer is the most common cancer amongst women in India. Breast cancer occurs when some breast cells begin to grow abnormally. These cells divide more rapidly than healthy cells and continue to gather, forming a lump or mass. The cells may spread (metastasize) to the lymph nodes or other parts of the body. **Objectives:** 1. To assess the level of knowledge on breast cancer among college girl. 2. To assess the level of practice on prevention of breast cancer and breast self examination among college girls. 3 To correlate the knowledge and practice on breast cancer and its prevention among college girls. 4. To associate level of knowledge on breast cancer with selected demographic variable of college girls. 5. To associate practice on prevention of breast cancer with selected demographic variable of college girls. **Methodology:** A cross sectional design was used to conduct the study and 50 nursing college girls have been selected by using simple random sampling technique. The study was conducted in Sabari College of Nursing, Kirumampakkam, Puducherry. The structured knowledge questionnaire and practice questionnaire was used to collect the data to assess the knowledge about breast cancer and practice regarding breast self examination. The content validity was done by experts in nursing and research. The collected data was analyzed by descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (chi square). **Result:** The study result has been proved that majority (82%) of college girls had moderate knowledge about breast cancer. But none of the participants had adequate knowledge about it. 68% of college girls had moderate practice of self breast examination. Our research had revealed that only marital status and religion had significant association with levels of knowledge. **Conclusion:** Early detection for breast cancer plays the leading role in reducing mortality rates and improving the patient's prognosis. The recommended screening method for early detection of this fatal disease is mammography, clinical breast examination and breast self examination. It is recommended that each and every woman above 20years of age should perform self breast examination at least once in a month

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## INTRODUCTION

Recent times have seen an increased in the incidence of cancer. This is mainly attributed to the urbanization, industrialization, life style changes, population growth and increased life span. Cancer mortality is the product of the incidence and the case fatality rate of a given cancer. Death rate estimate the average risk to the population of dying from a specific cancer, whereas the case fatality rate, the inverse of survival represents the proportion of individuals with specific cancer that will die from within the specific time. Thus, for a stable trend over time, case 0.25 would yield a mortality rate one quarter that of incidence (3). Breast cancer is not transmissible or infectious disease. Unlike some cancers that have infection related causes such as human papilloma virus infection and cervical cancer, there are no known viral or bacterial infections linked to breast cancer. Breast cancer is defined as malignant neoplasm of the breast arising from the epithelial lining of the lobule, ducts and the nipple. Breast cancer arises in the living cells epithelium of the ducts or lobules in the glandular tissue of the breast. Initially the cancerous growth is confined to duct or lobule where it generally causes no symptoms and has minimal potential for spread.

Approximately half of breast cancers develop in women who have no identifiable breast cancer risk factors other than female gender and age over 40 years (4). Certain other non-modifiable risk factors increase the risk of breast cancer including age, obesity, harmful use of alcohol, family history of breast cancer. History radiation exposure, reproductive status such as menstrual periods began and age at 1<sup>st</sup> pregnancy, tobacco use and postmenopausal hormone therapy. Some of the inherited high penetrance gene mutations greatly increase breast cancer risk, the most common dominant bring mutations in genes BRCA1, BRCA2, and PLAB2. Women found to have mutations in these genes could consider risk reduction strategy such as surgical removal of breast.

**NEED FOR THE STUDY:** The worldwide cancer incidence and mortality has rapidly increased in the last decade. The cancer burden globally, estimated to have crossed 8.1 million new cases and 9.6 million deaths in 2018. As per report Global cancer Observatory Latin American and the Caribbean (GLOBOCAN) 2018, the worldwide incidence of breast cancer is 2.08 million and deaths due to breast cancer are 6.3 lakhs with these figures, breast cancer is the most common cancer diagnosed in women.

Globally more than 1 million new cases of breast cancer are diagnosed every year and the incidence rate is increasing rapidly both developed and developing countries. It is also reported that more than half (60%) of the breast cancer deaths occur in economically developing countries (10). As per the registry, Tamilnadu had around 10,269 breast cancer cases in 2018. The projected incidence of patients with cancer in Indian among males was 679,421 (94.1 per 100,000) and among females 712,758 (103.6 per 1,00,000) for the year 2020. 1 in 29 females (breast cancer) and 1 in 9 Indians will develop cancer during their lifetime. The crude cancer incidence rate were highest I Kerala and Mizoram, followed by Haryana, Delhi, Karnataka, Goa, Himachal Pradesh, Uttarkhand and Assam (12). In Pondicherry, women were presenting with breast complaints, especially lumps is a common finding and a cause of significant anxiety in view of extensive public awareness. An account of 2,00,000 breast disorders are identified annually and it is noted that most of the palpable lesions are benign in most of the cancer affected woman (15).

## REVIEW OF LITERATURE

The review of literature for the present study is based on extensive survey of books, journals, web sources, unpublished thesis and international indices. An extensive review of research and non-research literature relevant to the study was undertaken, which helped the investigators to develop deeper insight into the problem and gain information on what has been done in the past regarding the awareness of breast cancer and practice of breast self examination in order to build the foundation of the study.

Iltaf Hussain, Abdul Majeed ital (2021) had conducted across sectional study to assess the awareness of female students in University about breast cancer's risk factors, signs and symptoms and self-breast cancer examination. A total of 774 participants were participated in the study. Majority of the participants were of the opinion that breast self examination was started only after 20 years of age (80%) and some of them had assumed that breast self examination was practiced on monthly basis (71.5%). The undergraduate female z in favor to start self breast examination and mammography (80%) should instructed after 20 years. Finally the study has been concluded that university female students reported a poor knowledge about breast cancer's risk factors, signs and symptoms. It has been found that good knowledge about breast cancer's risk factors, signs and symptoms and safety and clinical examination practices play an important role in the early detection of this cancer. (16)

Md-Sabbir Ahmed, Aleu sayeed. *et al* (2020) had carried out a study about the knowledge and practices on breast cancer among Bangladeshi female university students. The objective of the study was to assess the existing knowledge on breast cancer and the practices of breast self examination among female students. Across sectional study was carried out among 216 females. This study indicated that the female students had inadequate knowledge on different aspects of breast cancer and very low compliance to recommended Breast self-examination practices. (17)

Bisma Amin, Nakulkumar, *et al* (2022) donea study to assess the knowledge and awareness about breast self examination among the female students of Baba Farid institute of Technology, Dehradun. An online survey was conducted among 600 female students. The survey consists of self-structured questionnaire. Finally it has been concluded that more awareness strategies need to be applied in order to raise the knowledge about breast self Examination, mammography knowledge, and other preventive practice among young female population in this region. Along with this, the general health education programs directed towards the need to be launched immediately (23).

Samira S ,Abo Al-shiekh,, Mohamed Awadelkarim Ibrahim Ital (2021), have discussed a study about Breast Cancer knowledge and Practice of Breast self- examination among female University students, Gaza. The study revealed that there was a statistically significant relationship between applying steps breast self

examination correctly and regular practicing in that 52.67% of students finally it has been concluded that regular practicing Breast cancer will be increased among students if we teach them and inform them among the step of practicing breast self-examination. (24)

## RESEARCH METHODOLOGY

This chapter deals with methodology that was adapted by the investigators in order to assess the knowledge and practice regarding breast cancer and its prevention among college girls studying in selected college at puducherry. This chapter deals with research approach, research design, setting, population, sample and sampling technique and development of tool, description of tool, data collection methods and plan for data analysis.

**RESEARCH APPROACH:** Quantitative approach was used in this study

**RESEARCH DESIGN:** The research design adopted for this study was cross-sectional design

**STUDY SETTING:** The setting of the current study was sabari College of Nursing is situated in kirumambakkam, Puducherry. It was established in 2007 and it was a private college. Sabari College of Nursing is recognized by Indian Nursing Council and Tamil Nadu Nurses & Midwives Council and Affiliated to Puducherry University. The college is currently managed by G. Arulambigai Educational Trust. The college offers B.Sc. Nursing 4years program and there are about 186 students currently studying here. In sabari college of nursing there are many opportunities provided to the students like campus readiness program which is usually conducted for a week period to improve their overall knowledge apart from regular curriculum implementation.

**STUDY POPULATION:** The target population comprises of all nursing college girls who are studying III and IV year BSc nursing in Puducherry.

**SAMPLE:** The sample of the study comprises of nursing college girls who are all studying III and IV year BSc Nursing in Sabari college of nursing, Kirumampakkam, Puducherry.

**SAMPLE SIZE:** The sample size for the study was 50 nursing college girls who meet the inclusion criteria.

**SAMPLING TECHNIQUE:** Simple random sampling technique was used for the study.

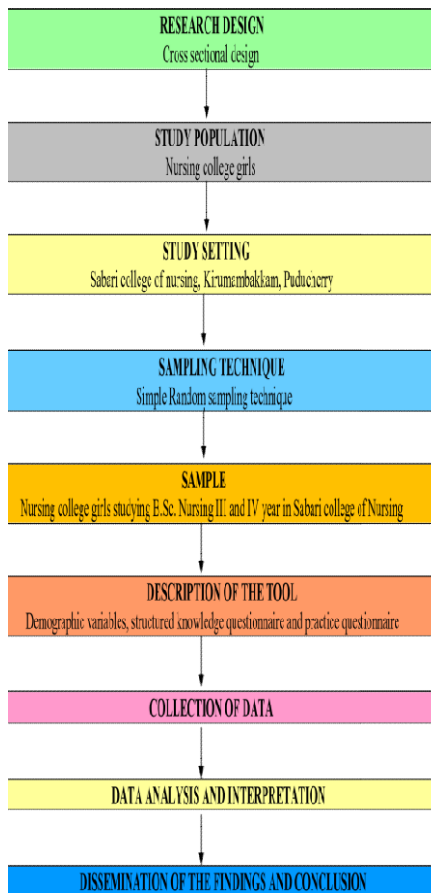
**DATA COLLECTION PROCEDURE:** The period of data collection was one week. The investigators have obtained permission from ethical clearance committee of Sabari college of nursing, Kirumambakkam to conduct this study in selected college at Puducherry. By using simple random sampling technique, 50 samples were selected from girls studying BSc Nursing in III and IV year. Permission was obtained from the study. Samples after explaining about the purpose of study. The structured questions are used to assess the knowledge and practice on breast cancer and breast self examination. The duration spent for each student to collect the data was 20 minutes.

**DATA ANALYSIS:** The collected data was analyzed by using descriptive and inferential statistics. Spearman's correlation method was used for finding correlation between knowledge and Practice of breast cancer and breast self-examination. Chi square test was used to find out the association between level of knowledge and practice with the selected demographic variables of the nursing college girls.

## SCHEMATIC REPRESENTATION OF THE STUDY

**DATA ANALYSIS AND INTERPRETATION:** The chapter explains the data analysis methods adopted based on the objective of

the study. The analysis and interpretation of data for the current study was based on the information collected through structured knowledge and practice on prevention of breast cancer. The collected data was coded, analyzed, organized, tabulated and associated with selected demographic variables and the findings were interpreted in the following sections.



**ORGANIZATION OF DATA:**

**SECTION A:** Frequency and percentage distribution of selected demographic variables among college girls.

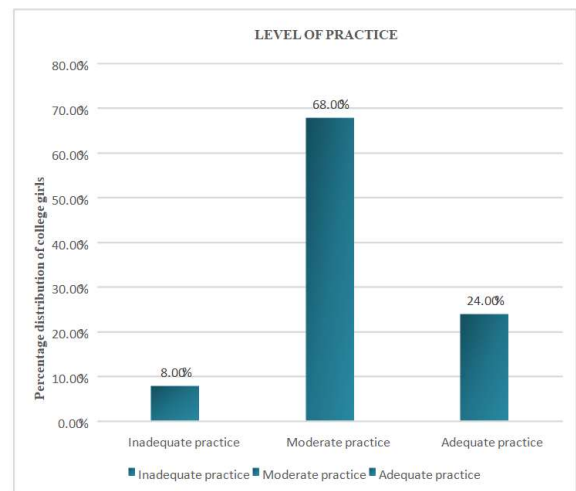
**SECTION B:** Distribution of level of knowledge, attitude and practice on prevention of breast cancer among college girls.

**SECTION C:** Correlation between knowledge and practice on breast cancer and its prevention among college girls.

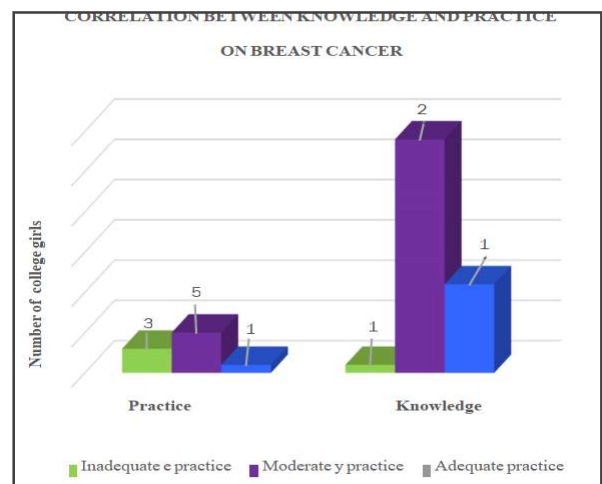
**SECTION D:** Association of selected demographic variables of college girls with level of knowledge on prevention of breast cancer.

**SECTION E:** Association of selected demographic variables of college girls with level of practice on prevention of breast cancer

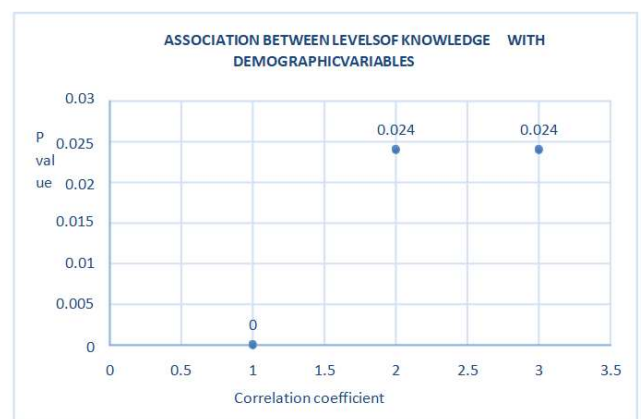
**Distribution of college girls according to their knowledge regarding prevention of breast cancer**



**Distribution of college girls according to their practice on breast self-examination**



**Correlation between knowledge and practice on breast cancer among college girls**



**Association between level of knowledge with marital status and religion**

This table reveals that only marital status is significant at  $p < 0.05$  with a value of 0.024. Religion is significant at  $p < 0.05$  with a value of 0.024. Unmarried girls belonging to Hinduism had significantly more moderate knowledge.

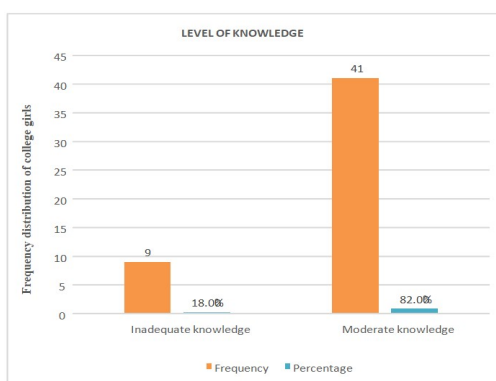


Table 1. Association of selected demographic variables of college girls with level of knowledge on prevention of breast cancer

SI. No	Variable	Level of knowledge				P value	
		Inadequate		Moderate Knowledge			
		n	%	n	%		
1.	<b>Age</b>					0.386	
	19years	1	11.1	22.2	1		2.4
	20 years	2	55.6		10		24.4
	21years	5	11.1		29		70.7
	23years	1			1	2.4	
2.	<b>Marital status</b>					0.024 **	
	Married	2	22.2		1		2.4
	Unmarried	7	77.8		40	97.6	
3.	<b>Residency</b>					0.4	
	Urban	6	66.7		21		51.2
	Rural	3	33.3		20	48.8	
4.	<b>Religion</b>					0.024**	
	Hinduism	7	77.8		40		97.6
	Christianity	2	22.2		1	2.4	
5.	<b>Monthly income</b>					0.49	
	Rs. <5000	0	0		3		7.3
	Rs.5000-10000	2	22.2		14		34.1
	Rs.10000-25000	4	44.4		18		43.9
	Rs.>25000	3	33.3		6	14.6	
6.	<b>Family history of breast cancer Relatives</b>					0.49	
	Nil	0	0		2		4.9
		9	100.0		39	95.1	
7.	<b>Are you aware about breast self examination</b>					0.229	
	Yes	8	88.9		40		97.6
	No	1	11.1		1	2.4	
8.	<b>Where do you seek information</b>					0.113	
	TV	2	22.2		1		2.4
	Social media	0	0		4		9.8
	Family	0	0		1		2.4
	Books	7	77.8		35	85.4	
9.	<b>Age of attaining menarche</b>					0.437	
	<12years	0	0		6		14.6
	>12 years	7	77.8		25		61.0
	15-20years	2	22.2		10	24.4	
10.	<b>History of frequent exposure to radiation</b>					0.22	
	Yes	1	11.1		1		2.4
	No	8	88.9		40	97.6	
11.	<b>Taking hormonal pills</b>					0.082	
	Yes	2	22.2		2		4.9
	No	7	77.8		39	95.1	
12.	<b>Having regular menstrual cycle</b>					0.92	
	Yes	8	88.9		36		87.8
	No	1	11.1		5	12.2	
13.	<b>Having any breast cancer problems</b>					0.49	
	Yes	0	0		2		4.9
	No	9	100.0		39	95.1	
14.	<b>Living in highly polluted area</b>					0.432	
	Yes	2	22.2		5		12.2
	No	7	77.8		36	87.8	

\* Significant at p &lt; 0.05 level

## DISCUSSION

A cross sectional study was conducted to assess the level of knowledge and practice regarding prevention of breast cancer among college studying in selected colleges girls at puducherry. A simple random sampling technique was adopted by the investigators to collect data from 50 college girls. This chapter is discussed under the following headings congruent with the objectives formulated for this study.

### OBJECTIVES

- To assess the level of knowledge on breast cancer among college girls.
- To assess the level of practice on prevention of breast cancer and breast self examination among college girls.
- To correlate the knowledge and practice on breast cancer and its prevention among college girls.

- To associate level of knowledge on breast cancer with selected demographic variable of college girls.
- To associate practice on prevention of breast cancer with selected demographic variable of college girls.

**Objectives 1: To assess the level of knowledge on breast cancer among college girls:** This study was supported and correlated with the research of Badeaa Thamer Yahyaa-2021 who had conducted a research about the women's knowledge about breast cancer in Al-Ramadi city, Iraq. Statistical analysis was carried out by SPSS Version 16. The mean age of study sample was 34(±11.9) years and 61.2% of them in age range of 20-39 years. Most of the respondents were housewives (72.0%), Married (68.4%) and low educated (58.8%). More than half of the participants (51.2%) showed an overall acceptable level of knowledge (66.67%) on the various aspects of breast cancer-related risk factors. There was a significant association between marital status and knowledge of women (P=0.008).

The study revealed a significant deficiency in health awareness campaigns about the breast cancer (33)

**Objectives 2: To assess the level of practice on prevention of breast cancer and breast self examination among college girls:**

Our current study results were strongly correlated with the research of **Hemalatha Kumarasamy (2020)** who had done a research about determinants of awareness and practice of breast self examination among rural women. This study aimed to assess knowledge and practice of breast self-examination (BSE) among females in a rural area of Trichy district among the participants 200. Most of the women 178 (89%) were aware of breast cancer. Only 26% of the women were aware of BSE. Only 18% of the females had ever checked their breast and 5% practiced it regularly. Awareness of BSE was found to be significantly associated with age and educational attainment. The level of knowledge and practice of BSE among females are unacceptably low.

**Objectives 3: To correlate the knowledge and practice on breast cancer and its prevention among college girls:**

Our research study was matched up and corresponded with the research of **B Rampa sarker (2022)** who had carried out a research about knowledge of breast cancer and breast self examination and practices and its barriers. This study also found a significant association between knowledge of breast cancer and practice of BSE, implying appropriate knowledge and awareness about breast cancer may lead to practice of BSE and thus early diagnosis which in terms can help to reduce the breast cancer morbidity and mortality (36).

**Objectives 4: To associate level of knowledge on breast cancer with selected demographic variable of college girls:**

Our current research study was slightly correlated and corresponded with the study of **A Nwaneri, E.O. Osuala, et al-2017** who had done a research about knowledge and awareness of breast cancer among rural women. Their major source of information on breast cancer was through health care providers followed by friends/relatives. There is a need to scale up health education programs to remove myths regarding breast cancer and improve health-seeking behavior among the rural women. (37)

## SUMMARY AND CONCLUSION

This chapter deals with summary, conclusion, major findings, limitations and recommendations of the study to assess the knowledge and practice regarding breast cancer and its prevention among college girls studying in selected college at puducherry.

### SUMMARY

Cross sectional design was used to conduct the study and 50 nursing college girls have been selected by using simple random sampling technique. The study was conducted in Sabari College of nursing, Kirumampakkam, Puducherry. The structured knowledge questionnaire and practice questionnaire was used to collect the data to assess the knowledge about breast cancer and practice regarding breast self examination.

**NURSING IMPLICATIONS:** Nursing students are responsible to educate the people especially girls about the practice of breast self examination and prevention of breast cancer in them.

**NURSING EDUCATION:** One of the leading functions of nursing is imparting education and creating awareness to people. Nurse should teach about the signs and symptoms, diagnostic tests, treatment and preventive measures of breast cancer. Nurse should demonstrate the steps of breast self examination to the girls.

**NURSING PRACTICE:** The nurses can plan for health program on awareness regarding breast cancer and importance of breast self examination in hospitals as well as in community and could emphasize on adolescent girls.

Developmental information booklet on breast cancer and its prevention will serve as a guide for the women to get adequate knowledge and awareness about breast cancer.

**NURSING ADMINISTRATION:** The present study helps the nurse administrator to plan for the teaching programme on awareness about breast cancer and its prevention in different educational institutions and hospitals in our country. They can also take initiation in imparting health information through individual and group teaching, booklets and social media.

**NURSING RESEARCH:** Utilization of any new research findings can be initiated within nurses related to knowledge and practice on breast cancer and its prevention among college girls. Various studies can be conducted with newer technology. The study findings shall be disseminated through conferences and journals to promote the awareness on breast cancer.

## RECOMMENDATION

Based on the findings of the study the following recommendations has been made for the further study

- Replication of the study maybe done with large samples.
- Similar type of study can be conducted among arts and science college girls.
- A comparative study can be done between urban and rural to explore the knowledge and practice on breast cancer and its prevention among college girl.

## CONCLUSION

The study result has been proved that majority 82% of college girls had moderate knowledge about breast cancer. But none of the participants had adequate knowledge about it. 68% of college girls had moderate practice of self breast examination.

## REFERENCES

- Global health estimates, world health organizations- 2000
- Hasanthika M Ranasinghe *et al*, Department of clinical medicine, university of Colombo, 2013
- Anette Hjartaker, Freddie Bray, "International Encyclopedia of public health", second edition, 2017.
- Abdelaziz Mousa Thabet, Biomed research international institute, 2014
- Clapp, R.W. *et al*, "Etiology of breast cancer", international encyclopedia of public health, 2018.
- Muhammad Akram, Mehwish Iqbal, Biological research institute, Saudi Arabia – 2017
- Moustafa Younis, college of medicine, university of sharjah- 2016
- Kelly anney Phillips, Jurg Bernhard, "Adjuvant breast cancer treatment" journal of the national cancer institute 95 (3), 190-197, 2003
- A.Gupta, K.Shridhar, center for chronic conditions and injuries, public health foundation of India - 2015
- Hyuna sung, *et al*, GLOBOCAN estimates and global cancer statistics, 2021
- Shreshtha Malvia *et al*. Asia, "Epidemiology of breast cancer" Pac J Clinical oncology, 2017
- Prashant Mathur, "Cancer statistics, 2020" report from National cancer registry programme, India, Global oncology, 2020
- Dr. R. Swaminathan, "Madras Metropolitan Cancer Registry" in Adyar cancer institute, 2020
- Ram sundaram, "Tamilnadu cancer registry project" report by cancer institute and state health department, 2020
- Prof. Annieannal.M, S.Lavanya, Pondicherry national cancer registry program report, 2018
- Iltaf Hussain, Abdul Majeed, "Awareness of female University students about breast cancer's risk factors, signs and symptoms

- and self-breast cancer examination” department of pharmacy practice, Pakistan.(2021)
- Md. Sabbir Ahmed, Abu, “Knowledge and practice on breast cancer among Bangladeshi female university students” department of Community health and Hygiene Dumki, Patuakhali, Bangladesh. (2020)
- Sutapa Biswas *et al.* “A study on breast cancer awareness among college going girls in Shillong cancer foundation of India, Kolkata, West Bengal, India. National institute of cancer prevention and Resarch, Noida, India. Asian Pac J Cancer Prev. 2020 Dec 1:21(12): 36393646.01557/APJCP.2020.21.12.3639. (2020)
- Seema P.Yadav, Niwruitti N. Jiwane *et al.* (2019), “Impact of educational intervention on awareness of breast cancer among female students of Government College of Nursing, Nagpur” <http://dx.doi.org/10.18203/2394->
- Dr. Shilpa Karir, “Breast cancer awareness among university students, Burla, Orissa” International journal of medical sciences and diagnosis research, Orissa. (2019)
- Romya Ahmad Sindi, Asmaa Ahmad Alzaharani, “Attitude towards breast cancer between medical and non-medical university students of pathology”, Saudi Arabia. (2019)
- Dina. N.K. Boulos, “Awareness of breast cancer among female students at Aims shams university, Egypt, clinical oncology department, Egypt (2014)
- Bisma Amin, Nakulkumar, “Knowledge of breast self examination and a online survey among female university students” Department and imaging Technology, Dehradun (2022)
- Samira s. Abo Al- sheikh, Mohamed Awadelkorin Ibrahim’s “Breast cancer knowledge and practice of breast self examination, female university students, gaza” mammography department, gaza, (2021).
- J Preg child health, “A study to assess the knowledge regarding breast self examination among the nursing students of Arunachal Pradesh : Inderaprashta” institute of medical sciences, Rachna, senior nursing tutor, ved college of nursing, India Vol 8 (6) DOI : 10.4172/2376-127X.1000474, (2021)
- Dinegde NG, Demie TG. “Knowledge and practice of breast self examination among young women in tertiary education in Addis Ababa, Ethiopia” department of public health, Ethiopia (2020)
- Nur Anis Izzati che Mut, “A study of breast self examination among female students in Malaysia” department of medical imaging, Malaysia, (2018)
- Subi Ansari, Associate professor, “Knowledge and practice of effective breast self examination among female nursing students” The leprosy mission Nepal Padmashree school of public health Bangalore.(2017)
- Dolar Doshi, B Srikanth Reddy, and P Karunakar Panineeya “Knowledge, attitude, and practice regarding breast self examination in a cohort of Indian female dental students, institute of dental sciences,” Hyderabad, Andhra Pradesh, India (2016)
- Dr. Elamurugan Sujindra, “ Knowledge, attitude, and practice of breast self examination in female nursing students of Puducherry” year: 2015/ volume:1/ Issue: 2/ page : 7174,(2015)

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