International Journal in Management and Social Science
Volume 07 Issue 07, July 2019 ISSN: 2321-1784 Impact Factor: 6.319
Journal Homepage: http://ijmr.net.in, Email: irjmss@gmail.com
Reviewed Refereed Open Access International Journal
ıle-Blind Peer

A STUDY ON IMPACT OF EDUCATION ON AWARENESS ABOUT BREAST CANCER AMONG RURAL WOMEN IN THANJAVUR DISTRICT

Mrs. T.Meena.,

M.A.,M.Phil., Ph.D Research Scholar (FT) , Department of Economics, RSGC

Dr.C.Sunitha.

M.A.,MBA.,M.Phil.,Ph.D.,B.Ed.,PGDM.,PGDE., Head and Associate Professor of Economics, Member Secretary-Academic Council, Rajah Serfoji Government Colleges(Auto),Thanjavur-5

ABSTRACT

Breast cancer is by far the most common cancer in women worldwide, both in the developed and developing countries. In low- and middle-income countries the incidence has been rising up steadily in the last years due to increase in life expectancy, increase urbanization and adoption of western lifestyles. Currently there is not sufficient knowledge on the causes of breast cancer; therefore, early detection of the disease remains the cornerstone of breast cancer control. Breast Cancer is the most common cancer in women in India. One woman is diagnosed with breast cancer, in India, every 4 minutes. One woman dies of Breast cancer, in India, every 8 minutes. An estimated 70,218 women died of breast cancer in India, for the year 2012, the highest in the world for that year. Factors that increase the risk of breast cancer: Country of birth, Increasing age, Female sex, Having had a breast cancer, Family history of breast cancer, Abnormal breast tissue on biopsy, Nodular densities on mammogram, High dose radiation to chest, Prolonged estrogen exposure, Smoking, Excessive weight, Heavy alcohol intake, Urban place of residence and social class, Race. This study analysis impact of education on awareness about breast cancer among rural women in Thanjavur district.

Key word: Breast Cancer, Awareness, Women Education.

INTRODUCTION

Being a man or a woman has a significant impact on health, as a result of both biological and gender-related differences. The health of women and girls is of particular concern because, in many societies, they are disadvantaged by discrimination rooted in socio cultural factors. For example, women and girls face increased vulnerability to HIV/AIDS. Some of the socio cultural factors that prevent women and girls to benefit from quality health services and attaining the best possible level of health include: unequal power relationships between men and women, social norms that decrease education and paid employment opportunities an exclusive focus on women's reproductive roles and potential or actual experience of physical, sexual and emotional violence. While poverty is an important barrier to positive health outcomes for both men and women, poverty tends to yield a higher burden on women and girls' health due to, for example, feeding practices especially malnutrition and use of unsafe cooking fuels (WHO)

Cancer is a genetic term for a large group of diseases characterized by the growth of abnormal cells beyond their usual boundaries that can then invade adjoining parts of the body and spread to other organs. Other common terms used are malignant tumours and neoplasm's Cancer can affect almost any part of the body and has many anatomic and molecular subtypes that each requires specific management strategies. Cancer is the second leading causes of death globally and is estimated to account for 9.6 million deaths in 2018. Lung, prostate, colorectal, stomach and liver cancer are the most common types of cancer in men, while breast, colorectal, lung , cervix and thyroid cancer are the most common among women (WHO)

Breast Cancer World Sinario

Breast cancer is by far the most common cancer in women worldwide, both in the developed and developing countries. In low- and middle-income countries the incidence has been rising up steadily in the last years due to increase in life expectancy, increase urbanization and adoption of western lifestyles. Currently there is not sufficient knowledge on the causes of breast cancer; therefore, early detection of the disease remains the cornerstone of breast cancer control. When breast cancer is detected early, and if adequate diagnosis and treatment are available, there is a good chance that breast cancer can be cured. If detected late, however, curative treatment is often no longer an option. In such cases, palliative care to relief the suffering of patients and their families is needed. The majority of deaths (269 000) occur in low- and middle-income countries, where most women with breast cancer are diagnosed in late stages due mainly to lack of awareness on early detection and barriers to health services. (WHO)

Cancer is a common disease. One in three people can expect a diagnosis of some form of cancer in their lifetime. In the U.K , breast cancer is the most common cancer in women and the most common causes of cancer in women. About 1 to 9 women can expect to develop breast cancer in their lifetime. There are about 41,000 new female casus of breast cancer diagnosed per years. However there are only about 42 deaths per 100000 women per year from breast cancer in the general population. Despite these numbers, women are benefiting from improvements in detecting and treating breast cancer, with death rates falling faster in the U.K than anywhere else in the world wild it is such a common disease, there are many women who are alive and live a full life with a diagnosis of breast cancer it is estimated that there are over 170000 women alive in the U.K who have been diagnosed with breast cancer in the previous ten years. The incidence of breast cancer is different around the world with the highest rates occurring in women living in the developed western world and the lowest numbers in women living in the far East current knowledge suggests that there are many different factors that influence in incidence of breast cancer. They are probably a combination of environmental and inherited factors. The incidence of breast cancer is much lower in Japan than in U.K, USA and Australia despite similar economic success. This suggests that the economy of a country has no influence on the incidence of breast cancer. Yet the incidence of breast cancer can rise when an individual migrates from an area of low risk to high risk.(Jacqucline Lewis)

Breast cancer is a type of cancer originating from breast tissue, most commonly from the inner lining of milk ducts or the lobules that supply the ducts with milk. Cancers originating

from ducts are known as ductal carcinomas; those originating from lobules are known as carcinomas. Breast cancer is a disease of humans and other mammals; while the overwhelming majority of cases in humans are women, men can sometimes also develop breast cancer. (Dr.Ravindra R. Kawade)

Breast Cancer in India

Breast Cancer is the most common cancer in women in India. One woman is diagnosed with breast cancer, in India, every 4 minutes. One woman dies of Breast cancer, in India, every 8 minutes. An estimated 70,218 women died of breast cancer in India, for the year 2012, the highest in the world for that year. India has a predominant young population and hence the numbers of women being diagnosed with breast cancer is only going to increase. India is seeing a spurt in the cases of breast cancer in the age group of 30 to 50 and the same is likely to increase.

Breast cancer in India is reaching alarming proportions. Breast cancer cannot be prevented. If it has to happen, it will happen. However, the deaths due to breast cancer can definitely be reduced. And that can be done, only and only by being aware of symptoms of breast cancer and reporting to doctor on time. Breast cancer is now the most common cancer in most cities in India, and 2nd most common in the rural areas. (Breastcancerindia.net)

Risk Factors of Breast Cancer

Various risk factors are listed below and divided according to whether they reduce or increase the risk of breast cancer: Factors that increase the risk of breast cancer: Country of birth, Increasing age, Female sex, Having had a breast cancer, Family history of breast cancer, Abnormal breast tissue on biopsy, Nodular densities (on mammogram, High dose radiation to chest, Prolonged estrogen exposure, Smoking, Excessive weight, Heavy alcohol intake, Urban place of residence and social class, Race. The world ‘cancer’ is derived from the Latin world meaning ‘Crab’ and the used to describe a malignant tumor. A cancer starts when a cell begins to divide and grow in an uncontrolled and abnormal way. The causes of this cluster together to from a tumors.(Jacqueline Lewis)

Types of Breast Cancer

Ductal carcinoma: This begins in the milk duct and is the most common type.

Labular carcinoma: This starts in the lobules.

Invasive Breast cancer is when the cancer cell break out from inside the labules or ducts and invade nearly tissue increasing the change of spreading to others parts of the body

Non – invasive breast cancer is when the cancer is still inside its place of origin and has not broker out. However, this cell can eventually develop into invasive breast cancer.

Breast cancer can also affect men, but it is less common in men than in women. (Medical news today)

Breast Cancer in Men

Breast cancer in men is rare. Around 350 men are diagnosed. With the disease each year in U.K compared with over 55,000 women however, the earlier breast cancer is found, the better the chance of successful treatment, so it's important to look out for any unusual changes and get them checked by the doctors right away. Around 80 men die from breast cancer in the U.K every year. Signs and symptoms of breast cancer in men: checking your breast issue regularly is especially important for men who have a family history of breast cancer or a genetic condition called klinefelter syndromes. Most breast tissues in men is concentrated in the area directly behind the nipple and the surrounding pigmented area, called the area most- through not all- breast cancer in men appear near the nipple as firm lumps. Men and boys can sometimes develop more breast tissues than normal due to a relatively common condition called gynaecomastia this is not related to breast cancer but can make the detection of a lump during physical examination harder. Breast cancer in men is diagnosed using much the same approach as diagnosis in women, including clinical examination, imaging and possibly a biopsy.(Mayoclinic)

OBJECTIVE OF THE STUDY

- To study the awareness of Rural women about causes, symptoms, diagnosis and treatment of breast cancer.
- To study on relationship between economic variables and awareness about Breast cancer among rural women.
- To study the impact of education on awareness about breast cancer among the rural women.

METHODOLOGY

The Thanjavur District in Tamilnadu is taken as the area for the present study. It is one of the biggest district in Tamilnadu state with an area of 3,396.5 square km. it is on the east cost of Tamilnadu. Basically it is on agriculture district. Thanjavur District is divided into three revenue sub division namely Thanjavur, Pattukkottai, Kumbakonam. During the formation of a separate district Thanjavur district was constituted with 15 Development blocks. Presently the district has only 14 administrative blocks and 51ward in Thanjavr. Using sampling technique 250 respondent were selected. Only the female respondent those who were above the age of 18 visiting the health center for both medical or non-medical reason during the two months March and April 2019 were considered for study and data was collected using a validate questionnaire.

REVIEW OF LITRATURE

Garfinkel L (1995), who studied the Incidence rates and mortality rates increase dramatically with age. While the rate of increase in Breast Cancer incidence is greatest in women under age 50, the majority of cases occur after age 50. Incidence rates in women before the age

45 are higher among blacks; after the age of 45, they are higher for whites. Women of higher socioeconomic status, married women, women living in urban versus rural areas have the highest rates. The prevalence is least in African countries. There is a clear trend for increase in prevalence of breast cancer in developed countries. Among the less developed nations India stands first in line, factors may be mainly attributed to life style change, western influence and urbanization.

Unfortunately, there is a new trend, indicating that breast cancer has overtaken cancer of cervix in the urban areas and their surroundings. Urbanization, early menarche, late menopause, lack of physical exercise, high fat diet and delayed pregnancy have been cited as some of the factors that might have contributed towards higher incidence of breast cancer. ICMR survey (2000) There is a great concern that breast cancer is also surfacing in younger women, between 25 and 30 years. "Breast cancer in early age group is very aggressive and dangerous as the chances of its spreading are faster than in those above 40-45 years,".

Monali Desai (2002) conducted a retrospective study of cases for seven years, from October 1994 to October 2001, to determine the type of breast lumps. Results showed that out of 212 cases, 172 were benign breast lump and 40 were malignant breast lump; 68.6% patients with benign lump were less than 25 years of age, while 85% with malignant disease were more than 40 years of age. Thirty percent in the malignant group were nulliparous and 40% had not breast feed their child. Family history of malignancy was positive in 27.5% patients in the malignant group and 14% in the benign group.

Charames and Bapat (2003), who analyzed the Majority of the genetic alterations are in the growth regulatory genes, genes involved in cell cycle progression and arrest contributing to the malignant transformation. Genomic instability can be broadly classified into Microsatellite Instability (MIN) with the mutator phenotype and Chromosomal Instability (CIN) with gross chromosomal changes.

Manisha Kadam (2007) ,conducted a study in Pune to understand the level of knowledge of working women regarding breast cancer and breast self-examination and also to assess the effectiveness of planned teaching programme on BSE. The study findings demonstrated that there was an increase in mean knowledge score after planned teaching programme which was statistically significant.

Bincy and Fazil Marickar (2008), who studied 250 patients with breast cancer to assess the epidemiological factors of breast cancer, identified that majority of the patients (62.8%) were in the age group of 40-49 years; 22.4 % of patients had positive family history of cancer breast; 70.4% of total patients attained menarche below the age of 15 years. They also observed in 90.4 % of patients that their age at first delivery was around 20 years, and 50% of patients studied were attained menopause. The study also found 66% of the patients had one or two children while 28.8% had more than two children.

DATA ANALYSIS

Overall Awareness about breast cancer by the rural women

Questioned about the general awareness regarding Breast cancer, half of the respondents revealed that they are not at all aware same. In the mostly available source of the information in the village primary health center workers and area staff nurse from 28 % of the respondents gained to the knowledge of Breast cancer. While the media account for 21% awareness the society compressing the family, relative and friends. Media is the easy convey of Awareness. The majority of rural area women awareness in area staff nurse and PHC workers.

Table No: 1

Overall Awareness about breast cancer by the rural women

S.No	Whether heard of breast cancer	No of respondents	Percentage
1	Yes	178	71%
2	No	72	29%
	Total	**250**	**100**%
If yes the source of information (multiple answers)			
1	Family / Friends/ Relatives	41	23%
2	PHC workers/ Area staff Nurse	50	28%
3	Family doctors/ Gynecologists	35	20%
4	Media	38	21%
5	Other source	14	08%
	Total	**178**	**100**%

Source : primary data

Impact of Education on Awareness

Women education plays and important role in economic development. There is a direct relationship between Breast cancer awareness is educational qualification. Educational qualification increases awareness about Breast cancer. Among the sample 21 percent of women in primary level. Most of the women or possessing educate in higher secondary level of education and degree level. Twenty six percent women of higher secondary level education and 22 percent women's degree level educated. Education increase awareness of breast cancer is increase.

Table No: 2

Education level of women

S.No	Education Level	No Of Respondents	percentage
1	Primary level	52	21%
2	Secondary level	41	16%
3	Higher secondary level	65	26%
4	Degree , master degree	56	22%
5	Diploma	22	09%
6	Others	25	10%
	Total	**250**	**100**%

Source: primary Data

Role of Socio Economic Factors and Breast Cancer Awareness

The study analyzed whether various socio-economic demographic variables have any statistically significant relationship with the awareness of Breast cancer. The economic condition and standard of living is connected in awareness. Economic condition increases the level of awareness about the Breast cancer. A similar relationship is witnessed between occupation status of women and awareness level. Forty two present of rural area women occupied agriculture their job and there awareness is low.

Table No: 3

Role of Socio Economic factors of Breast cancer awareness

Variables	Category	Awareness in no of respondents			Awareness in % of respondents		
		Aware	Not aware	Total	Aware	Not aware	Total
Age in years	Above 18 years	22	10	32	09%	4%	13%
	21 – 30 years	58	13	71	23%	5%	28%
	31-40	48	12	59	19%	05%	24%
	41 – 50	31	20	51	12%	08%	20%
	Above 50	19	18	37	08%	07%	15%
	Total	178	72	250	71%	29%	100%
Religion	Hindu	118	37	155	47%	15%	62%
	Christian	39	26	65	16%	10%	26%
	Muslim	21	09	30	08%	04%	12%
	Total	178	72	250	71%	29%	100%
Cast	BC	41	19	60	16%	08%	24%

	MBC	69	21	90	28%	08%	36%
	SC/ST	46	24	70	18%	10%	28%
	Others	22	08	30	9%	03%	12%
	Total	178	72	250	71%	29%	100%
Marital Status	Married	121	46	167	48%	18%	66%
	Unmarried	24	12	36	10%	05%	15%
	Widows / others	33	14	47	13%	06%	19%
	Total	178	72	250	71%	29%	100%
No of children	0	38	07	45	15%	03%	18%
	1	42	13	55	17%	05%	22%
	2	38	29	77	15%	12%	27%
	3	32	15	47	13%	06%	19%
	More than 3	28	08	36	11%	03%	14%
	Total	178	72	250	71%	29%	100%
Occupation	House wife	30	22	52	12%	09%	21%
	Agriculture worker	39	13	52	16%	05%	21%
	Government job	38	11	49	15%	04%	19%
	Private job	43	14	58	17%	06%	23%
	Self / Other work	28	12	39	11%	05%	16%
	Total	178	72	250	71%	29%	100%
Type of house	Own house	115	40	166	46%	16%	62%
	Rent house	63	32	94	25%	13%	38%
	Total	178	72	250	71%	29%	100%
Type of family	Nuclear	135	50	185	54%	20%	64%
	Joint family	43	22	65	17%	09%	26%
	Total	178	72	250	71%	29%	100%
Yearly family income	Less than 50000	37	12	49	15%	05%	20%
	50001 – 100000	51	25	76	20%	10%	30%
	100001 – 150000	48	19	68	19%	8%	27%
	More than 150000	42	16	57	17%	6%	23%
	Total	178	72	250	71%	29%	100%

Source: primary data

Aware about the causes of breast cancer

Breast cancer most often begins with cells in the milk-producing ducts. Breast cancer may also begin in the glandular tissue called lobules or in other cells or tissue within the breast.

identified hormonal, lifestyle and environmental factors that may increase the risk of breast cancer. But it's not clear why some people who have no risk factors develop cancer, yet other people with risk factors never do. It's likely that breast cancer is caused by a complex interaction of genetic makeup and environment of individual .(Mayo Clinic). Thirty eight percent of respondent or having a moderate awareness about Breast Cancer Cases.

Table No: 4

Aware about the causes of breast cancer

S.No	Do you know about the various treatment	No of respondents	Percentages
1	Yes	123	69%
2	No	55	31%
	Total	**178**	**100**%
If yes, causes			
1	Highly aware	23	19%
2	Aware	31	25%
3	Normal/ Moderate awareness	47	38%
4	Low level of awareness	22	18%
	Total	**123**	**100**%

Source: primary data

DIAGNOSIS AWARENESS OF BREAST CANCER

Tests and procedures used to diagnose breast cancer.

a) Breast exam: doctor will check both of breasts and lymph nodes in armpit, feeling for any lumps or other abnormalities.

b)Mammogram: A mammogram is an X-ray of the breast. Mammograms are commonly used to screen for breast cancer. If an abnormality is detected on a screening mammogram, then doctor may recommend a diagnostic mammogram to further evaluate that abnormality.

c) Breast ultrasound: Ultrasound uses sound waves to produce images of structures deep within the body. Ultrasound may be used to determine whether a new breast lump is a solid mass or a fluid-filled cyst.

d) Biopsy: A biopsy is the only definitive way to make a diagnosis of breast cancer. During a biopsy, the doctor uses a specialized needle device guided by X-ray or another imaging test to extract a core of tissue from the suspicious area.. Biopsy samples are sent to a laboratory for analysis where experts determine whether the cells are cancerous. A biopsy sample is also analyzed to determine the type of cells involved in the breast cancer, the aggressiveness of the cancer, and whether the cancer cells have hormone receptors or other receptors that may influence treatment options.

e) Breast magnetic resonance imaging (MRI): An MRI machine uses a magnet and radio waves to create pictures of the interior of the breast. Unlike other types of imaging tests, an MRI doesn't use radiation to create the images. Thirty one percent of women respondent are having fully awareness about breast cancer diagnosis in the study area.

Table No: 5

Aware about the various Diagnosis

S.No	Do you know about the various treatment	No of respondents	Percentages
1	Yes	137	77%
2	No	41	23%
	Total	**178**	**100**%
If yes, level of awareness			
1	Fully awarded	42	31%
2	Aware	38	28%
3	Normal/ Moderate	37	27%
4	Low level of awareness	20	15%
	Total	**137**	**100**%

Source: primary data

Awareness about Symptom of Breast Cancer

The most common symptom of breast cancer is a new lump or mass. A painless, hard mass that has irregular edges is more likely to be cancer, but breast cancers can be tender, soft, or rounded. They can even be painful. For this reason, it is important to have any new breast mass, lump, or breast change checked by a health care professional experienced in diagnosing breast diseases. Other possible symptoms of breast cancer include: Swelling of all or part of a breast, Skin irritation or dimpling ,Breast or nipple pain, Redness, scaliness, or thickening of the nipple or breast skin, Nipple discharge .Sometimes a breast cancer can spread to lymph nodes under the arm or around the collar bone and cause a lump or swelling there, even before the original tumor in the breast is large enough to be felt. Swollen lymph nodes should also be checked by a health care provider. Thirty two percent of women respondent are having a high aware about symptoms of Breast cancer.

Table No: 6

Awareness about symptom of breast cancer

S.No	Do you know about the symptom of breast cancer	No of respondents	Percentages
1	Yes	131	74%
2	No	47	26%
	Total	**178**	**100**%
If yes, symptoms			
1	Fully award	37	28%
2	High Aware	42	32%
3	Normal/ Moderate	29	22%
4	Low level of awareness	23	18%
	Total	**131**	**100**%

Source: primary data

Treatment Awareness of Breast Cancer

The size, stage, rate of growth, and other characteristics of the tumor determine the kinds of treatment. Treatment may include surgery, radiation and immunotherapy. Surgical removal of the tumor provides the single largest benefit, with surgery alone being capable of producing a cure in many cases. To somewhat increase the likelihood of long-term disease-free survival, several chemotherapy regimens are commonly given in addition to surgery. Most forms of chemotherapy kill cells that are dividing rapidly anywhere in the body, and as a result cause temporary hair loss and digestive disturbances. Radiation is indicated especially after breast conserving surgery and substantially improves local relapse rates and in many circumstances also overall survival. World wild, breast cancer comprises 22.9% of all cancers in women. In 2008, breast cancer caused 458,503 deaths world wild. Breast cancer is more than 100 times more common in women than breast cancer in men, although males tend to have poorer outcomes due to delays in diagnosis.(Dr.Ravindra R. Kawade). Eight three percent of women responded are having fully aware of breast cancer awareness.

Table No: 7

Aware about the various treatment of breast cancer

S.No	Do you know about the various treatment	No of respondents	Percentages
1	Yes	153	86%
2	No	25	14%
	Total	**178**	**100**%
If yes, treatment technique know			
1	Fully awarded	127	83%
2	High Aware	12	08%
3	Normal/ Moderate	11	07%
4	Low level of awareness	03	02%
	Total	**153**	**100**%

Source: primary data

Prevention Awareness of Breast Cancer

Shows that lifestyle changes can decrease the risk of breast cancer, even in women at high risk. To lower the risk: Limit alcohol: the greater the risk of developing breast cancer. The general recommendation based on research on the effect of alcohol on breast cancer risk is to limit to less than one drink a day, as even small amounts increase risk. Don't smoke: Evidence suggests a link between smoking and breast cancer risk, particularly in premenopausal women. Control the weight: Being overweight or obese increases the risk of breast cancer. This is especially true if obesity occurs later in life, particularly after menopause. physically active: Physical activity can help the maintain a healthy weight, which helps prevent breast cancer. Most healthy adults should aim for at least 150 minutes a week of moderate aerobic activity or 75 minutes of vigorous aerobic activity weekly, plus strength training at least twice a week. Breast-feed: Breast feeding might play a role in breast cancer prevention. The longer breast feed, the greater the protective effect. hormone therapy: Combination hormone therapy for more than three to five years increases the risk of breast cancer. If that taking hormone therapy for menopausal symptoms, ask your doctor about other options. You might be able to manage your symptoms with non -hormonal therapies and medications. Decide that the benefits of short-term hormone therapy outweigh the risks, use the lowest dose that work and continue to have the doctor monitor the length of time taking hormones. Avoid exposure to radiation and environmental pollution: Medical-imaging methods, such as computerized tomography, use high doses of radiation are needed, a link between breast cancer and cumulative exposure to radiation over lifetime. Reduce exposure by having such tests only when absolutely necessary.(Mayo Clinic). Thirty five percent of women are having high awareness of breast cancer prevention.

Table no:8

Awareness of prevention of breast cancer

S.No	Do you know about the prevention of breast cancer	No of respondents	Percentages
1	Yes	136	76%
2	No	42	24%
	Total	**178**	**100**%
If yes, level of awareness			
1	Fully award	35	28%
2	High Aware	48	35%
3	Normal/ Moderate	35	26%
4	Low level of awareness	18	13%
	Total	**136**	**100**%

Source: primary data

CONCLUSION

The present study highlights that inadequate knowledge about the breast health is found high among rural women that too among the socially, economically and educationally deprived women, formal educational programs to sensitize women regarding the importance of breast cancer screening techniques. These educational programs should consider factors affecting breast cancer screening. Bearing this in mind the researcher issued printed pamphlets to the respondents and others in rural women. The research Breast cancer awareness also important for rural area women screening programs and any other step of awareness program in rural areas.

REFERENCE

1. American Cancer Society (https://ecancer.org/news/12496-breast-cancer-statistics--2017.php.)
2. Breastcancerindia.net .
3. Breast cancer India (http://www.breastcancerindia.net/statistics/trends.html.)
4. Dr.C.Sunitha &Dr.V.Pugazhenthi ,2014, A Study on Impact of Health Insurance Growth on Sectoral Changes in the Indian Non Life Insurance IndustryInternational journal of Research and Development in Technology and Management –Kailash Volume: 21,Issue3,August 2014
5. Dr.C.Sunitha &Dr.V.Pugazhenthi ,2014, An Enquiry into the Performance of 108 Emergency Services in Tamil NaduEPRA International Journal of Economic and Business Review August, 2014 issue . -e ISSN 2347-9671

6. Dr.C.Sunitha &Dr.V.Pugazhenthi,2014,Changing Market Structure in Indian Insurance Industry-As revealed by Concentration ratio andHerfindahl–Hirschman index,Intercontinental Journal of Finance Research Review, Volume 2 ,Issue 7, july 2014 pp.64-80Available at http;//www.icmrr.org.
7. Dr.C.Sunitha &Dr.V.Pugazhenthi ,2014,Analysis of the Performance and Growth of Indian Standalone Health InsurersEconomic Challenger, Issue 64, July-Sep.2014, ISSN No. 0975 – 1351
8. .Dr.C.Sunitha &Dr.V.Pugazhenthi,2014,Health Insurance for Healthy India,International Journal of Environmental Economics ,Commerce And Management Studies April 2014, ISSN 2348-814X, pp157-163
9. Dr.C.Sunitha &Dr.V.Pugazhenthi ,2014, Role of Government Sponsored Health Insurance Schemes in Public Health Management In Tamil NaduIndian Journal of Management, volume7 Issue 12,Dec 2014,pp.7-.
10. Dr.C.Sunitha &Dr.V.Pugazhenthi ,2014, Role of Government Sponsored Health Insurance Schemes in Public Health Management In Tamil NaduIndian Journal of Management, volume7 Issue 12,Dec 2014,pp.7-.
11. Dr.C.Sunitha &Dr.V.Pugazhenthi,2014,An Analysis of Awareness About the features of Chief Minister's Comprehensive Health Insurance Schemes of Government of Tamil NaduInter-Continental Management Research, Volume 2 ,Issue 4, April 2014 ,
12. Dr.C.Sunitha &Dr.V.Pugazhenthi, 2013, A study on significance of Public Expenditure on Health and family welfare,SELP Journal of Social Science, Vol. IV, Part I April 2013, issue 15, ISSN:0975-9999 pg134-139
13. Dr.C.Sunitha &Dr.V.Pugazhenthi Indian Health Insurance claims- a macro Level AnalysisResearch Explorer, Volume 2, Feb 2013, Issue 3 pg1266-1269 . ISSN:2250-1940.
14. Dr.C.Sunitha &Dr.V.Pugazhenthi,2013,A Macro level study on Indian Health Insurance ClaimsSELP Journal of Social science, Vol. IV ,Part II April 2013,issue 15 ISSN:0975-9999 pg 119-124
15. Dr.C.Sunitha &Dr.V.Pugazhenthi,2011,Catastrophe insurance for Gross National HappinessInternational Journal of Applied Management and Research Vol:3 , Issue 1 June 2011, pp 45-52 , I S S N : 09748709
16. Dr.C.Sunitha &Dr.V.Pugazhenthi,2011,Retail –A Sunrise sector of the Indian Economy.International Journal of Applied Management and Research Vol:3 , June 2011, special issue- pp 409-412 – I S S N : 09748709
17. Dr.C.Sunitha &Dr.V.Pugazhenthi,2011,An Enquiry into Compulsory Coverage of Insurance in the Rural and Social Sector.Rural Economic Issues and Challenges, 2011, ISBN;978-81-920478-0-5
18. Dr.C.Sunitha &Dr.V.Pugazhenthi ,2010,An Analysis of claims of Indian Health Insurance industry during 2009-2010International Journal of Applied Management and Research Vol:2 , Dec 2010- pp642-646– I S S N : 09748709 .
19. Dr.C.Sunitha &Dr.V.Pugazhenthi,2010,A Study on awareness of Health Insurance among life insured women,International Journal of Applied Management and Research Vol:2 , Dec 2010- pp 590 –593 I S S N : 09748709
20. Dr.C.Sunitha &Dr.V.Pugazhenthi, 2015,The Government Sponsored Health Insurance Schemes for the Gross Domestic Healthiness.Journal of Health Management, Volume 17 Number 4(October-December, 2015). (SCImago Journal Rank Score: 0.143) Print ISSN: 0972-0634
21. https://siteman.wusyl.edu/prevention/take-proactive-control/8-ways-to-prevent-breast-cancer/.

22. Medical news today (www.medicalnewstoday.com/articles/37136.php.)
23. Mayoclinic : (http:// www.mayaclinic.org/diseases-conditions/male-breast-cancer/symptoms-causes/syc-20374740)
24. Mayoclinic : (http:// www.mayaclinic.org/diseases-conditions/ breast-cancer/symptoms-causes/syc-20352470)
25. Municipal corporation Thanjavur (http://hanjavur.nic.in/municipal-corporation-thanjavur).
26. M.Subadevi &Dr.C.Sunitha,2015,A Study on Socio Economic conditions of Landless Agricultural female labourers in Thanjavur.International Journal of Economic and Business Review, December 2015,volume.3, issue 12, pg290- 294.
27. M.Subadevi &Dr.C.Sunitha, 2016, Role of Women Labourers in Agriculture in ThanjavurInternational Journal of Economic and Business Review, March ,volume.4, issue 3 pg290-294.
28. Nutrition for women : Dr.Ravindra R.Kowade, Sports Publication , NewDelhi-110002, 2012.
29. National Rural Health Association: What's different about rural health care, Accessed 06/21/13. (https://mchb.hrsa.gov/whusa13/population-characteristics/p/rural-urban-women.html)
30. Sudhganga(https:/shodhganga.inflibnet.ac.in
31. Sunitha,C, A study on Awareness of Causes, Symptoms Diagnosis, Treatment Recovery and Prevention from Cervical Cancer among women in Thanjavur District, Tamilnadu, International Journal of Economic And Business Review. ISSN Online2347-9671,Print:2349-0187.SJIF Impact factor: 6.484 Volume No:4,Issue:12, December 2016.
32. Sunitha,C, A study on Perception about Pre Menstrual syndrome by Rural women in Thanjavur District, Tamilnadu., International Journal of Economic And Business Review.ISSN:Online2347-9671,Print:2349-0187. Volume No:5 Issue:13 January 2017.
33. Sunitha.C, Awareness and attitude towards Breast Cancer and Breast self examination among rural women in Thanjavur District,Tamilnadu International Journal of Multidisciplinary Research ISSN: Online2455-3662, SJIF Impact factor: 3.967, Volume: 3,Issue:1,January 2017
34. WHO(https://www.who.int/gender/women_health_report/full_report_20091104_en.pdf.)
35. WHO (https://www.who.int/topics/womens_health/en/.)
36. WHO (https ://www.who.int/cancer/en/.)
37. WHO (https://www.who.int/cancer/events/breast_cancer_month/en/).
38. Wikipidia (https:/en.m.wikipedia.org/wiki/breast-cancer)
39. Your guide to breast cancer: Jacqueline Lewis , The Royal society of medicine, first published: 2005.