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Breast Health: Knowledge, Attitude and Practice of Breast Self Examination among Female Undergraduate Students of Kashmir Valley

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ABSTRACT

Introduction: Breast self examination (BSE) is simple, non-invasive, requires little time and cost free practice and it can be performed by both young and old women. By performing BSE, female can recognize changes, such as thickening, lumps, spontaneous nipple discharge or skin change, and dimpling. The women who not perform BSE are at high risk for breast cancer. In Kashmir valley breast cancer is one of the most common cancer among women and breast cancer is the second most frequent occurring cancer among women worldwide.

Objective: The object of our study was to assess the knowledge, attitude and practice of BSE among female undergraduate college going students of Kashmir valley.

Methods: A cross sectional institution based design was conducted at the different colleges of Kashmir valley during 2019-20. In our study a total of 400 female college going students with their consent were included using stratified random sampling procedure. A well designed validated questionnaire was used for the data collection. The data collected was analysed using SPSS (version 20) software and the results obtained were interpreted statistically.

Results: In current study, a total of 400 undergraduate female college going students in the age group of 22-24 years participated in our. The study revealed that the main source of information regarding BSE were Electronic Media (17.0%), Health profession (11.5%), Teachers (10.0%), Parents (10.5%) among urban respondents and Electronic Media (12.0%), Health profession (9.0%), Teachers (7.0%) and Parents (12.0%) among rural respondents. Majority of the students lack in BSE practice due to lack of awareness, techniques for performing BSE and lack of knowledge about the importance of BSE feel it is not important for everyone to perform BSE (urban=79.5%, urban=84.0%) although majority of urban (63.5%) as well as rural (52.0%) respondents agree that BSE can help in early detection of breast disease. The main socio-cultural factors responsible for the women suffering from breast cancer in Kashmir were Ignorance, Non-availability of Female Oncologists, Turmoil and Shyness.

Conclusion: The findings of our study revealed that the female college going students of Kashmir valley had poor KAP toward BSE. It was suggested that Colleges and other stake holders should plan to promote provision of information, education and communication targeting females, and the general community to increase awareness towards breast self examination. The regular BSE, estrogen rich foods and suitable drinks (e.g., dandelion root tea) can improve breast health.

Keywords: Kashmir, BSE, Knowledge, Attitude, Practice, Breast cancer, Statistics

INTRODUCTION

Women's breasts are made up of fat, nipple, glands (alveoli) and a network of ducts through which milk can pass from the glands to the nipples. Each breast contains between 15 and 20 sections called lobes, each of which is composed of many smaller structures known as glands or alveoli and these glands produce milk. In the world our relationship starts from mother's breast milk so breasts for every woman are very important organs as these are the symbols of motherhood and womanhood. Cancer is a major public health problem in many parts of the world and any diseases affecting breasts particularly breast cancer is important. Breast cancer in women worldwide is by far the most common cancer diagnosed, ranking second in both sexes combined. Breast cancer is a malignant tumor that starts from the cells of the breast. The incidence of cancer is rising every year, and this is attributed to the changes in lifestyle and increase in life expectancy. In the literature (e.g., Das, Kalita and Pal, 2017; Agnihotri, 2017; Krishna, 2014; Dwivedi, 2012), we come across various studies which reported that the main causes of cancer are tobacco consumption, obesity, viral infections, radiation, stress, lack of physical activity, environmental pollutants and genetic factors. Cervical cancer and breast cancer are the commonest cancers among the female population of India. Kashmir is experiencing a rising graph of breast cancer patients. Cancer is synonymous to death in Kashmir. Breast cancer, the most frequent cancer of women in the world is the second leading site of cancer in females in Kashmir. But more tragic is that Kashmir has a higher death rate of breast cancer patients than that of rest of India. This is partly due to the lack of awareness regarding this dreaded disease and partly due to the late presentation before a practitioner. The high mortality rate of breast cancer patients in Kashmir can be attributed to its socio-cultural structure. The deeply rooted cultural values and traditions with respect to women folk become an obstacle in timely diagnosis and treatment of the disease. Breast cancer is characterised by the uncontrolled growth of abnormal cells in the milk producing glands of the breast or in the passages (ducts) that deliver milk to the nipples. For women aged 15–49 years, twice as many breast cancer cases are diagnosed in developing countries than in developed countries (Nade, Assob and Kwenti, 2015). Breast cancer is a public health problem which attacks women in their most productive years of life and can be cured with limited resources if detected early but treating advanced stage disease is expensive and outcome is often poor. Early detection of breast cancer plays an important role in decreasing its morbidity and mortality. No doubt, a lot of research on breast cancer has been done in the Valley but the thrust has been on the medical dimension which does not help much in framing long term policies and decisions for the patients. The social aspects of breast cancer need to be thoroughly studied so that such policies and programs would be framed for them which are inclusive and particularly feasible to women. Breast cancer, the most frequent cancer of women in the world is the second leading site of cancer in females in Kashmir and overall in both males and females, it is the second most common cancer present in the Kashmir Valley. Although the disease is mainly postmenopausal in western population, but the picture in Kashmir is no different than the rest of the country where the burden of breast cancer due to early onset cases is increasing at an alarming rate (Sheikh and Gazala, 2012). The official records show that during 2007-08, the number of cancer patients registered at SMHS hospital, Srinagar was 352, but during 2014-15, the number stood at 3687. In 2015, 4001 new cancer patients were registered in Regional Cancer Center while in 2016, the number of new registrations shot up to 4336. On an average, 15 new cases get registered everyday in SKIMS. The most important strategies for achieving early detection of breast cancer are mammography and

physical examination of the breasts by a physician or qualified health workers or clinical breast examination (CBE) and breast self-examination (BSE). The BSE is a process whereby women examine their breasts regularly to detect any abnormal swelling or lumps in order to seek prompt medical attention. Breast self-examination (BSE) is a simple, very low-cost, non-invasive early detection method used to detect early breast cancer, which involves the woman herself looking at and feeling for any change in their breast as early as possible, which yield a better survival rate. While mammography helps to detect breast cancer before women feel a lump, breast self-examination also helps women to be familiar with how their breast look and feel so they can alert their health care professionals if there is any change. In the world so many breast diseases are presented like neoplasm, malignant neoplasm (breast cancer), mastitis, and so on. However, in the world malignant neoplasm (breast cancer) is the most common and severe cancer in women. The prevalence of breast disease among the women can be minimize with early detection by breast self examination. The governmental organizations and nongovernmental organizations like American Society of Clinical Oncology, European Cancer Organization, International Union against Cancer and the Global Health Council have done much to stimulate awareness of the growing cancer burden in developing countries. The awareness of breast self examination in women is low in poor countries. The governmental organizations have started paying more attention to the growing problem of breast cancer in different states including Kashmir.

HOW TO EXAMINE OUR BREASTS

This simple procedure only takes ten minutes of our time once a month. We should get to know our breasts – how they normally look and feel – so that we can detect any recent changes.

WHAT TO LOOK FOR

(a) Nipple direction: any change in direction of a nipple – turning inwards or at an unusual angle.
(b) Nipple secretions: bleeding or weeping.
(c) Changes in the dark skin surrounding the nipple (areola): puckering or swelling.
(d) Lumps: most lumps are harmless, but new ones or old ones which increase in size should be checked by your doctor.
(e) Thickened tissue: a sudden change in size or shape of thick tissue often found in the upper and underneath areas of heavy breasts.
(f) Bulge on the surface of the breast.
(g) "Orange peel" skin: unusually enlarged pores anywhere on the breast may be an indication that a tumour is blocking the channels which carry lymph fluid.
(g) Dimples.
(h) Swelling: of the upper arm, or in the armpit, or just above the breast.

WHEN TO CHECK OUR BREASTS

The young girls should check their breasts once in a month during the week following period. After the menopause, or if a women is pregnant, or nursing examine of breasts on the first day of the month.

BREAST SELF-EXAMINATION
THREE EASY STEPS

The easy steps for breast self-examinations alongwith figures are explained below:

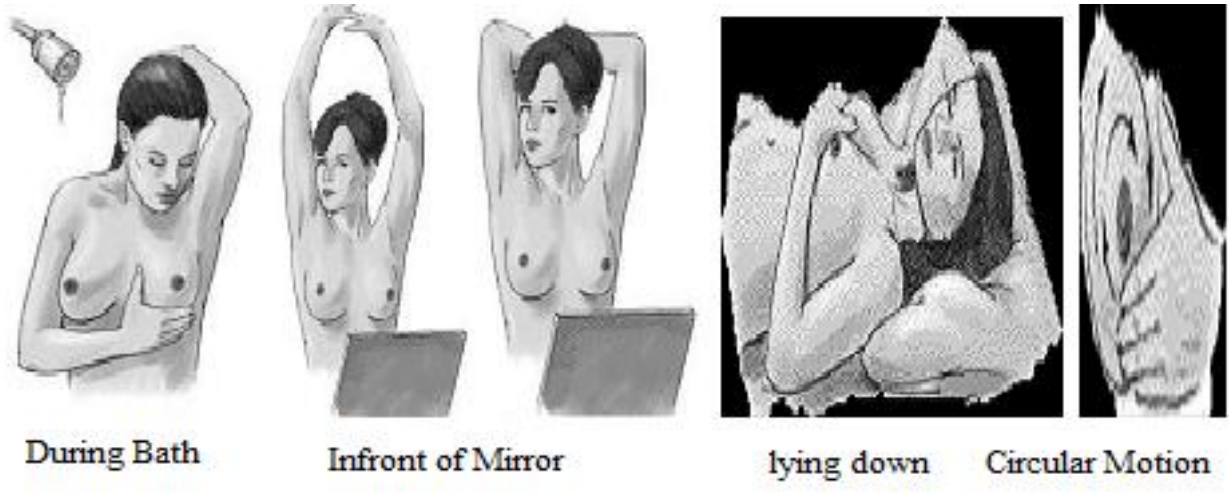
1. In The Shower or Bath: Fingers slide easier over wet skin – so with the flat of our hand move gently over each breast in a circular motion. Check for any lump, hard knot or thickening.

2. Infront of a Mirror: Hand by Sides: To examine the breasts, the lady should look at her breasts during bath or shower with arms at her sides while slowly rotating upper body from side to side. This will help women to check her breast shape, size as shown in Figure, 1.

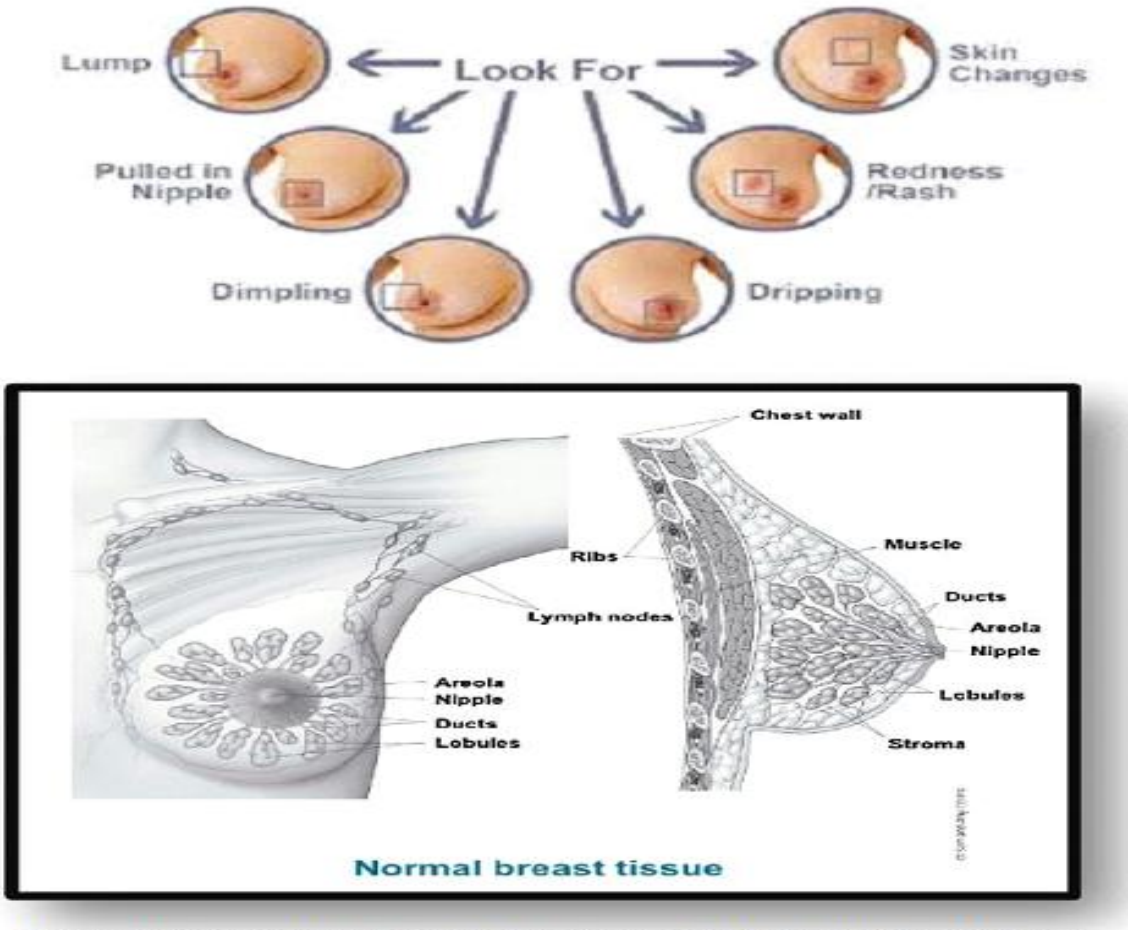
Hands on Head: The female can put her hands on her head and look for dimples or bulges in her breasts, particularly underneath. The Dimples which are equal in size and shape and occur in both breasts are considered normally harmless.

Hands over Head: The women should raise her arms high above head and look again for any changes – especially in the nipple area.
Hands on Hips: Finally, women should rest her palms on her hips and press down firmly while holding the shoulders back so that her chest muscles are flexed. The women should check for any changes in appearance. During each of these four steps you should rotate your upper body from side to side. By regular inspection you will see what is normal for you.
3. Lying Down: The female should put a pillow or fold a towel under her right shoulder and place her right arm behind her head. With the flat of her left hand she should press gently in small circular motions around an imaginary clock face. Start at the top of the breast for 12 o'clock and move in a clockwise circle until you return to 12 again. Then she should move in one inch and repeat. The women should keep doing this until she reach the nipple and this procedure should take at least four circles in total. The women should repeat this process with the pillow under her left shoulder and left arm behind her head. Finally, gently pinch each nipple between thumb and index finger. Any secretion, particularly if it comes from a single pore, should be checked by your doctor.

Pictures showing how a female can examine her breasts easily at home without any problem



In fact, there's no special procedure of examining breasts as everyone's breasts are different so one must know how her breasts normally look and feel. It's easier to spot anything unusual and one must know that warning signs of breast cancer are not the same for all women. It is reported that the common signs of breast cancer are, Lump, hard knot or thickening inside the breast or underarm are, swelling in the breast, upper chest or armpit, warmth, redness or darkening of the breast, change in the size or shape of the breast, Itchy, scaly sore or rash on the nipple, pulling in of nipple or other parts of the breast, nipple discharge, new pain in one spot that does not go away. The respondents should consult a doctor or take precautionary measures, if they notice any of these signs as these may be warning signs. It is important to keep in mind that a woman's life time risk of developing breast cancer is about 1 in 8 or approximately 12%. The World Health Organization has emphasized on raising awareness among women for early detection and reporting of breast cancer to increase life quality, survival and to overcome the ever increasing burden of this deadly disease worldwide.



Picture 1: Signs and symptoms of breast cancer and Normal breast tissues

As many studies indicated the practices of BSE are low among university students. A study conducted in Cameroon among female undergraduate students in the University of Buea indicated that only 9.0% knew how to perform BSE, only 13.9% knew what to look for while performing BSE, and only 3% had performed BSE regularly. Furthermore, Lack of knowledge on BSE was cited as the main reason for not performing BSE (Nade, Assob and Kwenti 2015). Limited knowledge about the realities of breast cancer and lack of knowledge about the importance of self-examination and how it is performed are the main barriers for not practicing BSE. Early detection plays a pivotal role in the prevention of breast cancer. The 5-year survival rate has reached approximately 85% with early detection, whereas later detection has decreased the survival rate to 56% (Hallal, 1982).Therefore, many women miss early detection and treatment opportunities due to lack of information and knowledge of early detection of breast cancer. This study is important in providing information toward BSE practice among female undergraduate students. Better documenting students, BSE practice would be useful to governmental and non-governmental organization in the design of interventions aimed at effective prevention of breast cancer, and it may also encourage other researchers and policy makers to carry out a more extensive research in this particular area being as baseline data. So assessing BSE practice will be helpful over scarce diagnostic service.

(a) Dietary Prevention

The role of a low fat diet in prevention of breast cancer needs to be verified; however, there are indications that breast cancer risk is increased with consumption of food rich in fat and low

fiber. A low-fat diet might decrease the risk of breast cancers through hormonal mechanism. Low-fat and high carbohydrate diet lead to a significant reduction in mamographic breast density and serum estradiol levels in the intervention group as compared to control after 2 years of follow up. Dietary modification to increase vegetables and fruits did not show a significant association between any of the specific fruits and vegetables and the reduction in the breast cancer risk. However, many case-control studies suggest that fruit and vegetable consumption may be associated with reduced breast cancer risk (Smith-Warner et al., 2001). Micronutrient and vitamin intake may play a role in reducing the risk for breast cancer. Some clinical studies have found an inverse association of dietary intake of vitamin E and breast cancer incidence (Zhang et el., 1999). Soya beans contain isoflavones, which are converted in the bowel to antioxidative and antiestrogenic compounds and there are epidemiologic data suggest that the consumption of soya products is associated with reduced risk of breast cancer. Many researchers have studied the role of lifestyle change in the prevention of breast cancer. Lifestyle changes and suitable and on-time screening tests are the most important factors in reducing the rate of breast cancer and in early diagnosis and treatment of breast cancer. Advantages of alterations of lifestyle are not only limited to women who are just at risk of breast cancer, but also to women who have been diagnosed. Lifestyle change is possible and effective in breast cancer survivors for prevention of recurrence (Demark-Wahnefried et al., 2014) . Also, increased survival and improved quality of life have been reported for these women. In contrast to studies of healthy women, the results of studies of survivors of breast cancer are more applicable because these studies have often reported the results of their interventions. For example, group-based lifestyle change can be implemented by cancer survivors in order to change the risk factors for poor survival and recurrence (Balneaves, et al., 2014). The main cause of the fact that stronger reports for the outcomes of lifestyle change are available in women who have survived from breast cancer in comparison to healthy women is that the outcomes can be assessed easier. This is due to the short duration between intervention and outcome. Many of these factors interact and may either increase or decrease each other's influence on the risk of breast cancer. Therefore, it seems rational to discuss each factor separately.

(b) Socio-economic status

High socioeconomic status is associated with an increased risk of breast cancer (Pudrovska, Anishkin and Shen, 2012). Women with high socioeconomic status make more frequent visits to doctors and have physical examinations, for early diagnosis of breast cancer. Also the lowest number of children increases the risk of breast cancer. Women of low socioeconomic status have less access to health care providers in comparison with women with high socioeconomic status in the same area and with the same insurance system. Individuals with different socioeconomic statuses have some variation in their lifestyles, which changes their risk for breast cancer. Lifestyle changes could be different in women with high and low socioeconomic status. In women with high socioeconomic status, the focus should be on changing dietary habits, smoking cessation, and discontinuation of alcohol consumption. Women with low socioeconomic status may benefit more from regular doctor visits, physical examinations, and screenings for breast cancer.

(c) Height and Weight

The role of body size in the risk of breast cancer is assessed in several studies. Taller women have an increased risk of breast cancer (Van den Brandt et al., 2000). The mechanisms are unclear, but some hormonal factors may be effective. Therefore, tall women should be screened more carefully for breast cancer. In

postmenopausal women, high weight is associated with an increase in the risk of breast cancer. This association is more prominent when they do not use hormone therapy. Absence of this association in premenopausal women is in favour of the role of hormones in this association. Obesity is associated with insulin resistance, which seems to be important in assessing the risk of breast cancer. In women with confirmed breast cancer, weight gain in an issue of concern. High height, high weight, and weight gain during middle adulthood are associated with increased risk of breast cancer. However, evidence concerning the role of weight loss in women who are at risk or are diagnosed with breast cancer is inadequate.

(d) Physical activity

Some studies have reported that the risk of breast cancer decreases with increased physical activity. Exercise's role in prevention of breast cancer is complicated. The results in premenopausal women are controversial, but, in postmenopausal women, exercise and physical activity decreases the risk for breast cancer by changing the estrogen, insulin, and insulin-like growth factor 1 (IGF-1) (Irwin et al., 2009). Women can decrease their risk of breast cancer by engaging in regular exercise. Also, exercise can positively affect other risk factors such as obesity and insulin resistance. Physical activity should be recommended to women not only for its role in the prevention of breast cancer, but also for its beneficial roles in managing obesity and insulin resistance. Increasing knowledge may be an effective way to change their physical activity level.

(e) Breast feeding

Breastfeeding decreases the risk of breast cancer. Twelve months of breastfeeding is associated with a 4.3 percent decrease in breast cancer risk (Stuebe et al., 2011). One study in Turkey has reported that shorter durations of breastfeeding can be an important factor that can increase the risk of breast cancer in women. Postmenopausal women who had more than forty-eight months of lactation are at a reduced risk for breast cancer (Oran et al., 2004). However, there are other factors, such as parity, that can alter the association between lactation and breast cancer. Even so, it seems that the association is strong enough to recommend breastfeeding in women. Also, breastfeeding has other beneficial effects for both mother and infant.

(f) Importance of education

As noted above, several nutritional changes, physical activity, and breast feeding can reduce the risk of breast cancer in women. Therefore, educating women about these factors and their importance in the risk of breast cancer plays an important role in the prevention of breast cancer. Some studies have reported that only giving information about lifestyle changes may not be enough to change the behavior of the female students. A consultancy service may be required in order to change the behaviors of the female students (Malak et al., 2010). However, it is not clear how useful consultancy service could be. Special strategies, such as group-based education, should be applied to increase the efficacy of women's knowledge in changing their behavior. More studies are needed to show the useful strategies in changing women's behavior. Also, it is important to start this education in early adolescence. Effective health education campaigns should be prepared to elucidate awareness and practice of BSE to students. Establishments of a club by trained BSE awareness peer group at the campus to improve practice of BSE. Information about BSE should be provided to the general public through different media platforms such as television, radio, and magazines, and facilitate social media platforms as a means of disseminating information on BSE.

In view of the above discussion and literature cited, we chose present study to know assess the knowledge, attitude and practice of BSE among female college going students of Kashmir valley.

Significance of the study

This study was significance because it showed the existing KAP of BSE among female college students in Kashmir valley and it also identifies the major challenges to practice BSE among female students in Kashmir. In view of the discussion and literature cited above, we chose present study with the following objectives:

General objective

To assess the knowledge, attitude and practice of breast self examination among undergraduate female college going students of Kashmir valley, 400 female students in the age group of 19-24 years were selected in the present study during 2019 to March, 2020 on their consent.

Specific objectives

1. To find out the knowledge of BSE among undergraduate female college going students
2. To determine the attitude of BSE among undergraduate female college going students
3. To examine the practice of BSE among undergraduate female college going students

MATERIALS AND METHODS

A survey was conducted in the year 2019-2020 in Kashmir valley and a total of 400 female undergraduate college going students of age group 18 - 24 years with no personal history of breast cancer and ability to understand the semi-structured questionnaire were recruited and randomly selected from various colleges of Kashmir valley using stratified random sampling technique. A verbal consent was obtained from all the respondents who agreed to participate in our study. The questionnaire for the current study was developed and validated based on information drawn from previous studies on the topic. The data collected from 400 respondents (200 rural and 200 urban) who completely filled and returned the self administered questionnaire was analysed statistically. The standard statistical tools like descriptive statistics, Chi-square test and graphs were used for analyzing of data with the help of statistical software SPSS (version 20.0) software.

Sample size Determination

The sample size for current study was computed using the formula given as (Cochran, 1997)

$$n = \frac{Z_{\alpha}^{2}\, P(1-P)}{d^{2}}$$

Here on the basis of previous studies, we take p=0.5, Z_{α} =1.96 and d=0.05. That gives the sample size n~384 and we decided to chose n = 400 for our study.

Research Hypothesis

Hypothesis: There will be no significant difference in Knowledge, attitude and practice of breast self examination among

$$X^{2} = \sum_{i=1}^{2} \frac{(o_i - e_i)^2}{e_i}$$

female undergraduate students between rural and urban college students. To test the hypothesis, we use chisquare test (with usual notations) given by

where $X^{2} \sim \chi_{1}^{2}$, o_i and e_i represent observed and expected frequencies. We reject H_0 if p-value is less than specified level of significance 0.05 or 0.01.

RESULTS AND DISCUSSION

The data shown in Table 1, reveals that a total of 400 female (200 rural and 200 urban) college going students were selected for the present study. It has been observed that majority of the respondents were in the age group of 22-24 years (urban=57.0%, rural=51.5%), from middle class families (urban=93.5%, rural=89.5%), living in nuclear families (urban=76.5%, rural=80.5%) and majority of respondents (urban=76.5%, rural=80.5%) reported that they do not have any family members/relatives with history of breast self examination. Statistically, it has been observed that in all statements there is a significant difference in the socio-demographic characteristics of under graduate female College students understudy ($p<0.01$).

Table 1: BSE Socio-demographic characteristics of under graduate female College students

S.No.	Variable	Category	Location		Chisqare	P-value
			Urban	Rural		
			Frequency (%)	Frequency (%)		
1.	Age (years)	19-21	84 (42.0)	97 (48.5)	1.481	>0.05
		22-24	114 (57.0)	103 (51.5)		
2.	Economic Status	Middle class	187 (93.5)	179 (89.5)	2.057	>0.05
		Lower class	13 (6.5)	21 (10.5)		
3.	Type of Family	Nuclear	153 (76.5)	161 (80.5)	0.948	>0.05
		Joint	47 (23.5)	39 (19.5)		
4.	Do any of your family members/relatives have history of breast self examination?	Yes	15 (7.5)	12 (6.0)	0.357	>0.05
		No	185 (92.5)	188 (94.0)		

The data presented in Table 2, reveals that in response to statement 1, i.e., Did you heard about breast self examination, 54.5% urban and 41.5% rural reported that they have heard about this. Statistically, there is a significant difference in the awareness among rural and urban female college going students (P<0.01). In response to statement 2, i.e., If your answer is yes? What is your source of information, rural respondents who have heard about BSE reported Electronic Media (17.0%), Health profession (11.5%), Teachers (10.0%), Parents (10.5%) and any other (5.5%) whereas urban respondents who have heard about BSE reported Electronic Media (12.0%), Health profession (9.0%), Teachers (7.0%), Parents (12.0%) and any other (1.5%). Statistically, there is non significant difference in the awareness among rural and urban female college going students in statement 2 (P>0.05). In response to statement 3, i.e. Everyone should perform BSE, majority (urban=79.5%, urban=84.0%) of the respondents do not agree to it.

Statistically, there is non significant difference in the statement 3 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 4, i.e., Can BSE help for early detection of breast disease, majority of urban (63.5%) respondents and rural (52.0%) agree to it. Statistically, there is a nonsignificant difference in the statement 4 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 5, i.e., Are you aware of the age at which we should begin breast self examination, majority (urban=82.5%, urban=86.5%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 5 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 6, i.e., Are you aware how often should you perform BSE, majority (urban=71.5%, urban=80.5%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 6 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 7, i.e., Are you aware when should a woman with regular menstruations do BSE, majority (urban=81.5%, urban=86.0%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 7 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 8, i.e., Are you aware about the correct position of body while performing BSE, majority (urban=65.5%, urban=70.5%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 8 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 9, i.e., Are you aware about the correct position of body while performing BSE, majority (urban=67.5%, urban=73.0%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 9 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 10,

i.e., Are you aware about positioning of your hand during inspection?, majority (urban=66.5%, urban=74.0%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 10 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 11, i.e., Are you aware about positioning of your hand during inspection?, majority (urban=73.5%, urban=79.5%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 12 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 12, i.e., The characteristics of a breast mass are least suggestive of malignancy, majority (urban=84.0%, urban=95.5%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 11 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). In response to statement 13, i.e., Do you know main steps for performing BSE, majority (urban=88.0%, urban=91.5%) of the respondents do not agree to it. Statistically, there is non significant difference in the statement 13 regarding the awareness among rural and urban female college going students towards BSE (P>0.05). The findings of our study are partially in agreement with the earlier studies (Gwarzo, Sabitu and Idris, 2009 , Zavare et al.,2015) and partially in disagreement with the earlier studies (Al-Sharbatti et al., 2013, Kasahun, 2014). It is believed that the reasons for this inconsistency might be due to the difference in the level of knowledge towards BSE among the students and the difference in accessibility to information or mass media also the emphasis given to BSE.

The results of our study coincides with the early study on assessment of knowledge of Breast self examination (BSE) among the students and important steps for identifying breast tumors at an early stage (Marinho et al., 2003).

Table 2: BSE knowledge of under graduate female College going students in Kashmir

S.No.	Variable	Category	Location		Chisquare	P-value
			Urban	Rural		
			Frequency (%)	Frequency (%)		
1.	Did you heard about breast self examination?	Yes	109 (54.5)	83 (41.5)	6.771	<0.01
		No	91 (45.5)	117 (58.5)		
2.	If your answer is yes? What is your source of information?	Electronic Media	34 (17.0)	24 (12.0)	4.730	>0.05
		Health professionals	23 (11.5)	18 (9.0)		
		Teachers	20 (10.0)	14 (7.0)		
		Parents	21 (10.5)	24 (12.0)		
		Any other	11 (5.5)	03 (1.5)		
3.	Every one should perform BSE?	Yes	41 (20.5)	32 (16.0)	1.357	>0.05
		No	159 (79.5)	168 (84.0)		
4.	Can BSE help for early detection of breast disease?	Yes	127 (63.5)	104 (52.0)	5.420	>0.05
		No	73 (36.5)	96(48.0)		
5.	Are you aware of the age at which we should begin breast self examination?	Yes	35 (17.5)	27 (13.5)	1.222	>0.05
		No	165 (82.5)	173 (86.5)		
6.	Are you aware how often should you perform BSE?	Yes	57 (28.5)	39 (19.5)	4.441	<0.05
		No	143 (71.5)	161 (80.5)		
7.	Are you aware when should a woman with regular menstruations do BSE?	Yes	37 (18.5)	28 (14.0)	1.488	>0.05
		No	163 (81.5)	172 (86.0)		
8.	Are you aware about the correct position of body while performing BSE?	Yes	69 (34.5)	59 (29.5)	1.149	>0.05
		No	131 (65.5)	141 (70.5)		
9.	Are you aware about the techniques of regular breast self-examination?	Yes	65 (32.5)	54 (27.0)	1.447	>0.05
		No	135 (67.5)	146 (73.0)		
10.	Are you aware about positioning of your hand during inspection?	Yes	67 (33.5)	52 (26.0)	2.691	>0.05
		No	133 (66.5)	148 (74.0)		
11.	Are you area about the patterns that you use during palpation of the breast?	Yes	53 (26.5)	41 (20.5)	2.003	>0.05
		No	147 (73.5)	159 (79.5)		
12.	The characteristics of a breast mass are least suggestive of malignancy?	Yes	12 (6.0)	09 (4.5)	0.452	>0.05
		No	188 (84.0)	191 (95.5)		
13.	Do you know main steps for performing BSE ?	Yes	24 (12.0)	17 (8.5)	1.332	>0.05
		No	176 (88.0)	183 (91.5)		

The data presented in Table 3, reveals that in response to statement 1, i.e., Breast self examination is necessary, 83.5% urban and 80.5% rural agree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 2, i.e., Do you think breast self examination can give you a benefit (s), majority of the respondents 63.0% urban and 59.5% rural agree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05).

In response to statement 3, i.e., During BSE makes me feel so funny, majority of the respondents 56.5% urban disagree 63.0% and 52.0% rural respondents agree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 4, i.e., BSE is not embarrassing to me, majority of the respondents 60.5% urban and 66.0% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 5, i.e., Doing BSE is not wasting time, majority of the respondents 60.5% urban and 54% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05).

In response to statement 6, i.e., After doing BSE makes me feel satisfying, majority of the respondents 59.0% urban and 54.5% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 7, i.e., If there is lump, I prefer to get treatment from a health institution, majority of the respondents 63.5% urban and 60.0% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 8, i.e., If I can do BSE once in a month, I Feel comfortable, majority of the respondents 58.0% urban agree but majority of rural 51.5% rural disagree to this statement. However, statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 9, i.e., All women should do BSE, majority of the respondents 73.5% urban and 68.0% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 10, i.e., I really care about my breasts, majority of the respondents 72.5% urban and 67.0% rural agree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 11, i.e., I am afraid to think about the breast cancer, majority of the respondents 68.0% urban and 71.5% rural agree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 12, i.e., Because I always worry about having breast cancer, I want to do BSE, majority of the respondents 59.0% urban and 52.0% rural agree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 13, i.e., I am interested in doing regular BSE, majority of the respondents 53.5% urban and 56.0% rural disagree to this statement. Statistically, there was a non

significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 14, i.e., I am interested in searching for information regarding BSE from the internet, magazine, newspaper, and friends, majority of the respondents 57.0% urban and 60.5% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). In response to statement 15, i.e., I am discussing with my friends about BSE, majority of the respondents 63.5% urban and 70.5% rural disagree to this statement. Statistically, there was a non significant difference in the attitude regarding this statement among rural and urban female college going students (P>0.05). The results of our study coincides with the early study on assessment of knowledge of Breast self examination (BSE) among the students and important steps for identifying breast tumors at an early stage (Marinho et al., 2003).

Table 3: BSE Attitude of under graduate female College going students in Kashmir

S.No.	Variable	Category	Location		Chisquare	P-value
			Urban	Rural		
			Frequency (%)	Frequency (%)		
1.	Breast self examination is necessary?	Yes	167 (83.5)	161 (80.5)	0.610	>0.05
		No	33 (16.5)	39 (19.5)		
2.	Do you think breast self examination can give you a benefit (s)?	Yes	126 (63.0)	119 (59.5)	0.516	>0.05
		No	74 (37.0)	81 (40.5)		
3.	During BSE makes me feel so funny?	Yes	87 (43.5)	104 (52.0)	2.896	>0.05
		No	113 (56.5)	96 (48.0)		
4.	BSE is not embarrassing to me?	Yes	79 (39.5)	68 (34.0)	1.301	>0.05
		No	121 (60.5)	132 (66.0)		
5.	Doing BSE is not wasting time?	Yes	121 (60.5)	108 (54.0)	1.726	>0.05
		No	79 (39.5)	92		
6.	After doing BSE makes me feel satisfying?	Yes	118 (59.0)	109 (54.5)	0.825	>0.05
		No	82 (41.0)	91 (45.5)		
7.	If there is lump, I prefer to get treatment from a health institution?	Yes	127 (63.5)	120 (60.0)	0.519	>0.05
		No	73 (36.5)	80 (40.0)		
8.	If I can do BSE once in a month, I Feel comfortable?	Yes	116 (58.0)	97 (48.5)	3.625	>0.05
		No	84 (42.0)	103 (51.5)		
9.	All women should do BSE?	Yes	147 (73.5)	136 (68.0)	1.462	>0.05
		No	53 (26.5)	64 (32.0)		
10.	I really care about my breasts?	Yes	145 (72.5)	134 (67.0)	1.434	>0.05
		No	55 (27.5)	66 (33.0)		
11.	I am afraid to think about the breast cancer?	Yes	136 (68.0)	143 (71.5)	0.581	>0.05
		Yes	64 (31.0)	57 (28.5)		
12.	Because I always worry about having breast cancer, I want to do BSE?	No	118 (59.0)	104 (52.0)	1.984	>0.05
		Yes	82 (41.0)	96 (48.0)		
13.	I am Interested in doing regular BSE?	Yes	93(46.5)	88 (44.0)	0.252	>0.05
		No	107(53.5)	112 (56.0)		
14.	I am interested in searching for information regarding BSE from the internet, magazine, newspaper, and friends?	Yes	114 (57.0)	121 (60.5)	0.505	>0.05
		No	86 (43.0)	79 (39.5)		
15.	I am discussing with my friends about BSE?	Yes	73(36.5)	59 (29.5)	2.216	>0.05
		No	127 (63.5)	141 (70.5)		

The data presented in Table 4, reveals that in response to statement 1, i.e., Do you practice breast self examination, 88.5% urban and 91.5% rural disagree to this statement. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 2, i.e., Do BSE once a month, majority of the respondents 83.5% urban and 86.5% rural disagree to this statement. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement

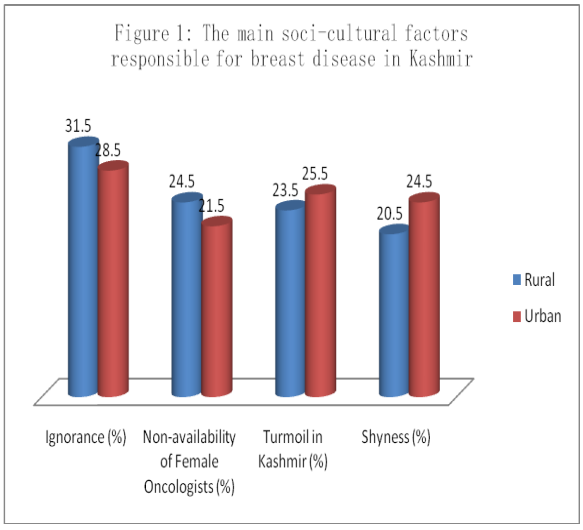
3, i.e., Do you know the correct method of BSE, majority of the respondents 92.5% urban and 94.5% rural reported that they do not know. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 4, i.e., Do you know the three fundamental BSE techniques, majority of the respondents 93.5% urban and 86.5% rural reported that they do not know. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 5, i.e., If your answer is yes for the above question (i.e., question 4), what technique you used, 2.0% concentric, 1.5% parallel lines, 1.0% consecutive clock times, 2.0% don't know about any technique reported urban whereas 1.0% concentric, 0.5% parallel lines, 1.0% consecutive clock times, 1.0% don't know about any technique reported by rural respondents. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 6, i.e., Have you ever seen palpable lump or mass in you breast, majority of the respondents 95.5% urban and 96.5% rural reported that they do not notice any breast disorder. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 7, i.e., Have you ever seen palpable lump or mass in you breast, majority of the respondents 95.5% urban and 96.5% rural reported that they do not notice any breast disorder. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 8, i.e., When was the last time you perform breast self examination, the urban respondents reported that we performed BSE week ago (4.5%), month ago (61.5%), year ago (28.5%) and never practiced (5.5%). The rural respondents reported that we performed BSE week ago (6.0%), month ago (71.0%), year ago (14.5%) and never practiced (8.5%). Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 9, i.e., I used to discuss the importance of BSE with my friends, majority of the respondents 92.5% urban and 90.5% rural reported that they do not discuss this issue with friends. Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). In response to statement 10, i.e., If you don't ever practice breast self examination what was your reason, the urban respondents reported that we don't know the techniques (33.5%), afraid to touch my breast (14.0%), fear of outcome (10.5%), don't know what technique used as too young to practice (14.5%), no symptom of breast cancer (13.0%) and no one recommended (14.5%), no symptom of breast cancer (13.0%) and no one recommended (14.5%). Further, the rural respondents reported that we don't know the techniques (37.0%), afraid to touch my breast (17.0%), fear of outcome (8.5%), don't know what technique used as too young to practice (16.0%), no symptom of breast cancer (10.0%) and no one recommended (11.5%). Statistically, there was a non significant difference in the practice regarding this statement among rural and urban female college going students (P>0.05). BSE is a procedure whereby women examine their breasts habitually to detect any abnormal swelling or lumps in order to seek prompt medical attention (Kayode and Akande, 2005) where as mammography helps to detect breast cancer before women feel a lump, breast self-examination also helps women to be familiar with how their breast look and feel so they can alert their health care professionals if there is any change. The scientists encourage BSE, it has been

reported that breast self-examination, carried out once monthly, between the 7th and 10th day of the menstrual cycle, goes a long way in detecting breast cancer at the early stages of growth when there is low risk of spread, ensuring a better prognosis when treated (Kayode and Akande, 2005). In a study (Muhammed, 2014), it has been reported that early diagnosis has a positive effect on the prognosis and limits the development of complications and disability. Furthermore, it increases life quality and survival of an individual.

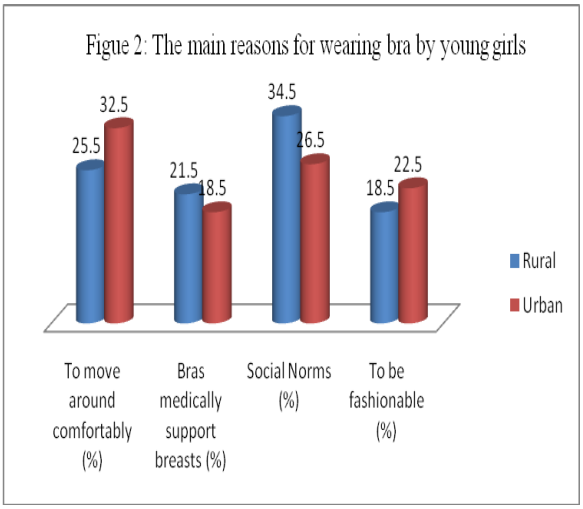
Table 4: Practice of BSE of under graduate female College going students in Kashmir

S.No.	Variable	Category	Location		Chisquare	P-value
			Urban	Rural		
			Frequency (%)	Frequency (%)		
1.	Do you practice breast self examination?	Yes	23 (11.5)	17 (8.5)	1.000	>0.05
		No	177 (88.5)	183 (91.5)		
2.	Do BSE once a month?	Yes	33 (16.5)	27 (13.5)	0.706	>0.05
		No	167 (83.5)	173 (86.5)		
3.	Do you know the correct method of BSE?	Yes	15 (7.5)	11 (5.5)	0.658	
		No	185 (92.5)	189 (94.5)		
4.	Do you know the three BSE techniques?	Yes	13 (6.5)	7 (3.5)	1.895	>0.05
		No	187 (93.5)	193 (86.5)		
5.	If your answer is yes for the above question, what technique you used?	Concentric circles	4 (2.0)	2 (1.0)	0.586	>0.05
		Parallel lines	3 (1.5)	1 (0.5)		
		Consecutive clock times	2 (1.0)	2 (1.0)		
		I don't know what technique I used	4 (2.0)	2 (1.0)		
6.	Have you ever seen palpable lump or mass in you breast?	Yes	11 (5.5)	13 (6.5)	0.138	>0.05
		No	191 (95.5)	193 (96.5)		
7.	What made you to start performing BSE?	Fear of breast cancer	115 (57.50	123 (61.5)	1.054	>0.05
		Media	27 (13.5)	21 (10.5)		
		Friends	58 (29.0)	56 (28.0)		
8.	When was the last time you perform breast self examination?	Week ago	9 (4.5)	12 (6.0)	12.193	<0.01
		Month ago	123 (61.5)	142 (71.0)		
		Year ago	57 (28.5)	29 (14.5)		
		Never practice BSE	11 (5.5)	17 (8.5)		
9.	I used to discuss the importance of BSE with my friends?	Yes	15 (7.5)	19 (8.5)	0.514	>0.05
		No	185 (92.5)	181 (90.5)		
10.	If you don't ever practice breast self examination what was your reason?	I don't know the techniques	67 (33.5)	74 (37.0)	2.972	>0.05
		I afraid to touch my breast	28 (14.0)	34 (17.0)		
		Fear of outcome	21 (10.5)	17 (8.5)		
		I don't know what technique I used too young to practice	29 (14.5)	32 (16.0)		
		No symptom of breast cancer	26 (13.0)	20 (10.0)		
		No one recommended	29 (14.5)	23 (11.5)		

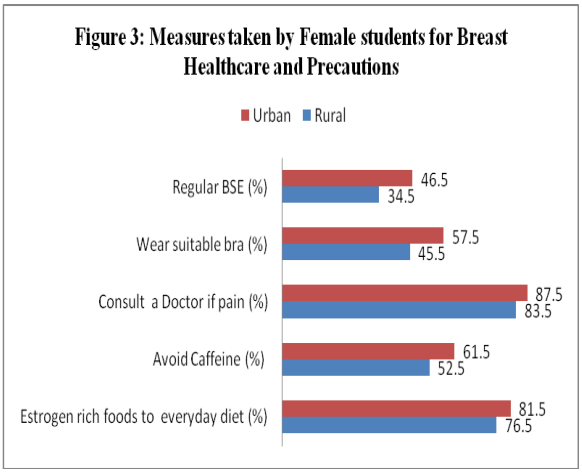
The data presented in Fig 1, reveals that majority (>75%) of the respondents understudy reported that the main socio-cultural factors responsible for the women suffering from breast cancer in Kashmir valley are Ignorance (31.5% rural, 28.5% urban), Non-availability of Female Oncologists (24.5% rural, 21.5% urban), Turmoil (23.5% rural, 25.5% urban) and Shyness (20.5% rural, 24.5% urban). It is important to note that women's breasts come in many shapes and sizes. There is no perfect shape or size for women breasts. The normal breasts of a women can be large or small, smooth or lumpy, and light or dark.



The data shown in Fig. 2, revealed that the main reasons for wearing bra by young girls were to move around comfortably (rural=22.5%, urban=32.5%), bras medically support breast (rural=21.5%, urban=18.5%), social norms (rural=34.5%, urban=26.5%) and to be fashionable (rural=18.5%, urban=22.5%). Researchers found that men prefer shapely, perkier breasts to the larger kind. But a fuller chest is still top of the pops, it has been revealed. Scientists are interested in finding out exactly what it is about the female form that is so appealing. The debate regarding wearing bra or no bra seems to have been going on since time immemorial and majority believe as per health point of view wearing a bra is not essential. The latest research on wearing bras and breasts reported that wearing bra from an early age did nothing to help support the chest, reduce back pain or prevent breast sagging scientifically. The scientists believe that young women would gain more tone and supporting breast tissue if no bra were used at an early age. The majority of the people encourage young girls to wear bra due to several reason like social, psychological etc. The scientists advise that bra should have no wires, constructed of soft fabric, custom-fitted to each woman's size and configuration to avoid problems. The major religions of the world encourage women to wear a modest dress as clothing is an important symbol of religious identification. To protect stiffness of women chest, Islam allow women to wear a bra provided but if women uses bra to keep the chest erected or pointed out, than its haraam. The proper Islamic dress code is practiced in order to build one's self-esteem and maintain one's self-respect and dignity amongst members of the society. The Muslims corpse is usually wrapped in a white cloth to serve as the shroud, men generally use three pieces of cloth and female five that shows necessity of wearing proper dress by Muslim women. The results of our study are in agreement with the earlier study (Dr. Sabahat, Dr. Shayesta and Dr. Bilal, 2018)



The data presented in Figure 3, reveals that the measures taken by female college students for breast healthcare and precautions were regular BSE (urban=46.5%, rural=34.5%), wear suitable bra (urban=57.5%, rural=45.5%), consult a doctor if pain (urban=86.5%, rural=83.5%), avoid caffeine (urban=61.5%, rural=52.5%) and Estrogen rich foods to everyday diet (urban=81.5%, rural=76.5%).



CONCLUSION

The regular practice of BSE could protect a woman from severe morbidity and mortality due to Breast cancer. The results obtained from 400 female (200 rural and 200 urban) students, revealed that majority of the whom were in the age group of 22-24 years (urban=57.0%, rural=51.5%), from middle class families (urban=93.5%, rural=89.5%), living in nuclear families (urban=76.5%, rural=80.5%) not having any

family history of breast self examination (urban=76.5%, rural=80.5%). The source of information about breast self examination of rural respondents were Electronic Media (17.0%), Health profession (11.5%), Teachers (10.0%), Parents (10.5%) and any other (5.5%) whereas among urban respondents were Electronic Media (12.0%), Health profession (9.0%), Teachers (7.0%), Parents (12.0%) and any other (1.5%). Statistically, there was non significant difference in the awareness among rural and urban female college going students. The majority of the respondents due to lack of awareness about the importance of BSE feel it is not important for everyone to perform BSE (urban=79.5%, urban=84.0%) although majority of urban (63.5%) as well as rural (52.0%) respondents agree that BSE can help in early detection of breast disease. The majority of the respondents were not aware how to perform BSE and do not know the main steps for performing BSE (urban=88.0%, urban=91.5%). Our results are in partial agreement with the earlier studies. The majority of the respondents (63.5% urban and 59.5% rural) feel breast self examination can give benefit (s) but reported daily BSE is like embarrassment. Majority of the respondents do not consult immediately a doctor if they notice some abnormality to their breasts as they have fear of breast cancer. Majority of respondents are not doing regular BSE (53.5% urban and 56.0% rural) and there is a significant difference among rural and urban respondents in discussing issues with anyone. The majority of the respondents were not aware of basic three techniques of breast self examination and were feeling embarrassment. The majority (>75%) of the respondents reported that the main socio-cultural factors responsible for the women suffering from breast cancer in Kashmir were Ignorance (31.5% rural, 28.5% urban), Non-availability of Female Oncologists (24.5% rural, 21.5% urban), Turmoil (23.5% rural, 25.5% urban) and Shyness (20.5% rural, 24.5% urban). The majority of the respondents reported that they wear bra due to several reason like religious, social, psychological etc. The results of our study coincide with the earlier study (Dr. Sabahat, Dr. Shayesta and Dr. Bilal, 2019). In conclusion, a small percentage of respondents is practicing BSE regularly and a high proportion of respondents were not aware of the correct steps of the BSE procedure. It is suggested that the best way to save women's lives is to increase their awareness of the potential harms of breast cancer, raise their awareness level about early warning signs, risk factors and early detection procedures for this deadly disease. The regular BSE, estrogen rich foods and suitable drinks (e.g., dandelion root tea) can improve breast health. The researchers encourage Cruciferous Veggies, Plant-Based Protein, Flax Seeds, Oily Fish and Tumeric foods for good breast health. It is recommended that science education may be promoted more, female expertise should play their role and organize awareness camps, Govt, NGOs, Clinicians and religious persons work together to increase awareness and work for the peaceful solution of Kashmir conflict and Media play its crucial role in increasing awareness on Health.

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Conflict of interests

The authors declare that there is no conflict of interest.

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