



Awareness and Knowledge Regarding Early Detection of Breast Cancer in Bangladesh

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ABSTRACT

Breast cancer in women is a major health burden and most common cause of cancer death among women in both high recourse and low recourse countries. The incidence, mortality and survival rate in different parts of the world vary from 4 to 10 fold. Recent global cancer statistics indicate that breast cancer incidence is rising at a faster rate in populations of developing countries. The incidence of breast cancer in Bangladesh seems to be very high. As we do not have any cancer registry with relevant data about age, sex, marital status, different types of cancers, diagnostic & treatment status and survival & mortality rate of cancer patients it is difficult to say the exact situation in Bangladesh. However the present study has conducted to assess the knowledge regarding breast cancer risk factors, symptoms, methods of diagnosis and different screening programs, to assess the awareness regarding breast cancer, to compare the knowledge of breast cancer among male and female medical students and to investigate the relation between socio-economical factors and breast cancer risk factors. The study area was at Dhaka District in Bangladesh. It was a Cross-Sectional descriptive type study. The study was conducted at selected different Hospitals in Dhaka District. Purposive sampling method was used for the study. Total 400 patients were selected from the Hospitals of the study area. Data were collected from primary and secondary sources. Primary data were collected from the respondents of the study area. Secondary data were collected from books, research reports, journals, annual reports, Website of Ministry of Health and family planning internet etc. Data were collected by face to face interview with the respondents. Duration of the study was 24 months. A pre-designed semi-structured questionnaire was developed use as data collection instrument. Prior to the interview, the purposes of data collection were explained to the respondents and verbal consent was obtained. Data were collected by face-to-face interview by the investigator. All the data were checked, cleaned and edited after collection. Then those cleaned data were analyzed by computer program Statistical Package for the Social Sciences (SPSS). From the result it was found that the rate of breast cancer screening practice among young females and women in Bangladesh is low and there are some barriers for doing breast cancer screening among this group. But as this group is an educated group and has positive attitudes toward learning breast cancer screening and breast self examination from practice instructors, it is recommended to promote public breast health awareness campaigns through the media. Also, it is mandatory to establish or improve nationwide policy guidelines to increase the dissemination of information about breast cancer, the importance of breast self examination and other screening methods for controlling breast cancer among young females in Bangladesh. In order to bridge the gap between knowledge and practice of breast cancer, all women should ensure that all women are educated on proper breast cancer and breast cancer practice. The Ministry of Health and family welfare should design and implement an intensive health education programme for schools, colleges, madrasa, universities, hospitals and clinics. Educational materials such as posters and leaflets should be freely available at public places, educational institutions, public transports, bus stands, railway stations, hospitals and clinics to facilitate awareness regarding breast cancer and breast self examination. Knowledge about breast cancer and breast self examination should be given specially to young females for early detection of any abnormalities in breast and breast cancer further. Awareness and knowledge seems to play vital role in early detection of breast cancer.

Key words: *Breast Cancer, Awareness, Knowledge, Menarche, Breast self examination, Breast screening, Early Detection, Mamogram, Contraceptives.*

INTRODUCTION

Nowadays, breast cancer is one of the most frequently detected cancers and is the major cause of death among women worldwide (Loh and Chew 2011). Based on the National Cancer Registries in Asian countries, variation for crude incidence rate of breast cancer is 21.3 per 100,000 population in Jordan (Petro-Nustus and Mikhail 2002), 21.4 per 100,000 in Iran (Sadjadi et al. 2009), 24.1 per 100,000 in Turkey (Nahcivan and Secginli 2007) and 52 per 100,000 population in Japan and South Korea (Youlden et al. 2014). Malaysia being one of the countries in the Asian region affected with modernization is heavily burdened with the problem, with breast cancer occurring in 34.86 per 100,000 populations (Hisham and Yip 2004). In Bangladesh, breast cancer is the most common cancer and the first cause of death from cancer among women. According to the latest WHO data published in 2020 Breast Cancer Deaths in Bangladesh reached 6,808 or 0.95% of total deaths. According to the National Cancer Registry in Malaysia, there were 3525 female breast cancer cases registered in Malaysia, and 1 out every 19 Malaysian women has the chance of getting breast cancer during their lifetime (National Cancer Registry 2006). Early detection of breast cancer can reduce its morbidity and mortality (Avci 2008). Mammography, clinical breast examination and breast self-examination (BSE) are considered effective methods for early detection of breast cancer (Avci 2008). There are arguments surrounding the efficacy of BSE. A large well-conducted randomized controlled trial among 266,064 textile workers in Shanghai which teaching women to perform BSE showed distribution of tumor size and stage at diagnosis as well as mortality rate for breast cancer was nearly same between women in the two arms of the trial (Thomas et al. 2002).

Breast cancer (BCa) is the leading incident cancer amongst women in Bangladesh. There is no national cancer registry in Bangladesh. Using data from India and Pakistan, it has been estimated that 30,000 Bangladeshi women are newly diagnosed with BCa annually. Over 40% of women diagnosed with BCa in Bangladesh are premenopausal and most women present with locally advanced or disseminated disease. Hence, in contrast to what is seen in developed countries, in Bangladesh, BCa is a disease of young women which conveys high morbidity and mortality due to presentation at a late stage. Access to breast surgery and radiotherapy is increasing across Bangladesh such that morbidity and mortality could be significantly reduced if BCa was to be diagnosed at an earlier stage (clinical down-staging). Recognizing this, BCa has been identified as a major target for early disease diagnosis by the Bangladesh Ministry of Health and Family Welfare. Campaigns to educate women about the symptoms and signs of BCa have been proposed. It has been reported that abreast health awareness program would be ineffective because of entrenched complex socio-cultural, economic, and health systems barriers that include gender inequity and human rights issues. The Bangladesh Midlife Women's Health Study (BMWHS) is a population-based study to which 1590 women, aged 30–59 years, were recruited between September 2013 and March 2014, to better understand the health needs of Bangladeshi women at midlife. This study has revealed that the major barrier to cervical cancer in Bangladesh is a lack of understanding of the concept of screening asymptomatic people [8]. We now report on the knowledge and awareness of BCa and barriers to the utilization of methods for the early detection of BCa, using data from the BMWHS.

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding breast cancer risk factors, symptoms, methods of diagnosis and different screening programs.
2. To assess the awareness regarding breast cancer.
3. To compare the knowledge of breast cancer among male and female medical students.
4. To investigate the relation between socio-economical factors and breast cancer risk factors.

METHODOLOGY OF THE STUDY

1. Study area

The study area was at Dhaka District in Bangladesh.

2. Study Design

It was a Cross-Sectional descriptive type study.

3. Study place

The study was conducted at selected different Hospitals in Dhaka District.

4. Sampling method

Purposive sampling method was used for the study.

5. Sample size

Total 400 patients were selected from the Hospitals of the study area.

6. Sources of Data

Data were collected from primary and secondary sources.

7. Sources of Primary

Primary data were collected from the respondents of the study area.

8. Sources of secondary data

Secondary data were collected from books, research reports, journals, annual reports, Website of Ministry of Health and family planning internet etc.

9. Method of data collection

Data were collected by face to face interview with the respondents.

10. Duration of the Study

Duration of the study was 24 months.

11. Tool of Data Collection

The tool was prepared by keeping the objectives of the study as the framework that reflect the study variables. A pre-designed semi-structured questionnaire was developed use as data collection instrument.

12. Procedure of Data Collection

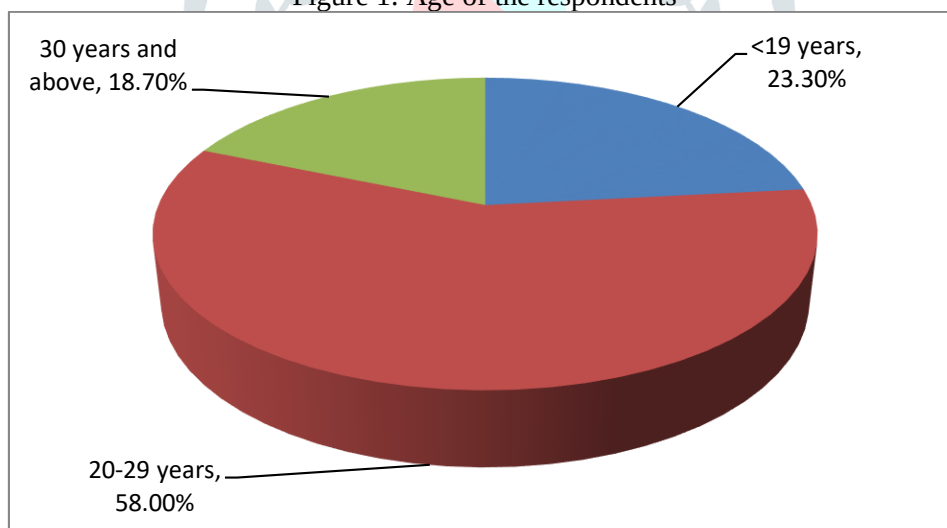
Prior to the interview, the purposes of data collection were explained to the respondents and verbal consent was obtained. Data were collected by face-to-face interview by the investigator.

13. Data Processing and Analysis

All the data were checked, cleaned and edited after collection. Then those cleaned data were analyzed by computer program Statistical Package for the Social Sciences (SPSS).

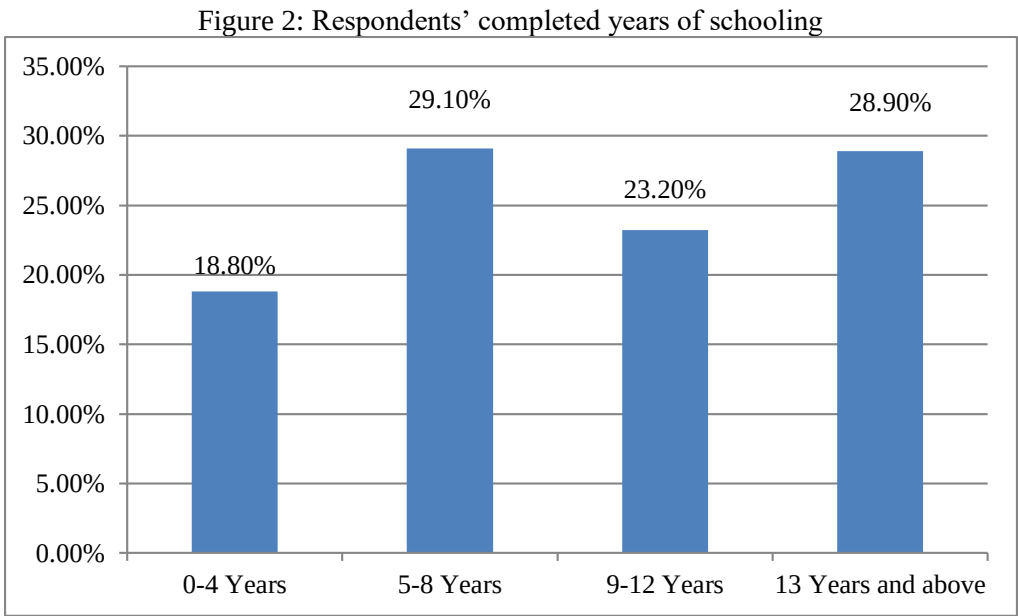
RESULTS AND DISCUSSION

Figure 1: Age of the respondents



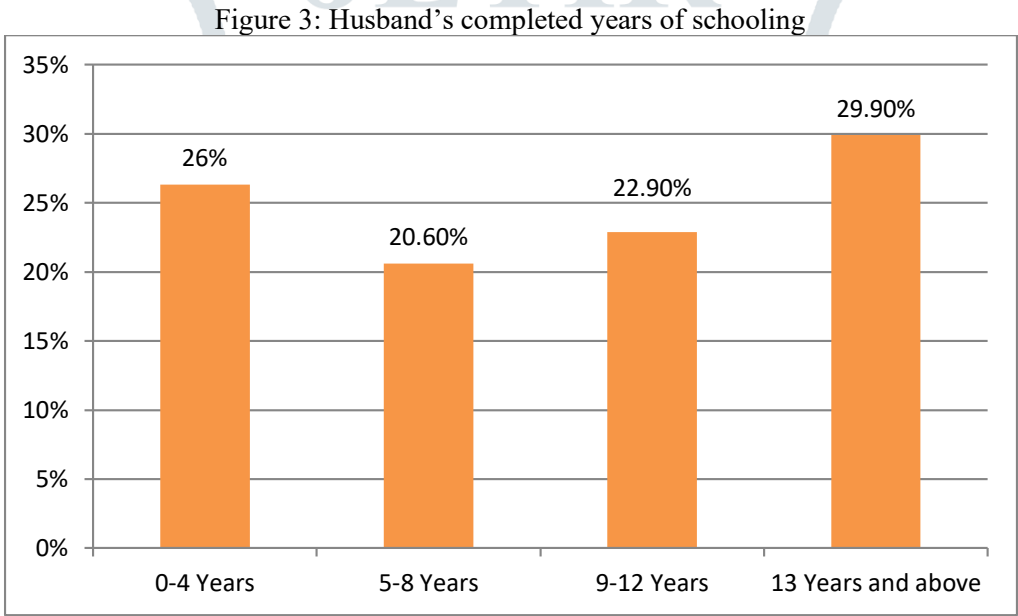
Source: Field survey, 2022

Age of the respondents has shown in the above graph. From the result it was found that 23.30% respondents were age group less than 19 years, 58% respondents were age group 20-29 years and 18.70% respondents were age group 30 years and above.



Source: Field survey, 2022

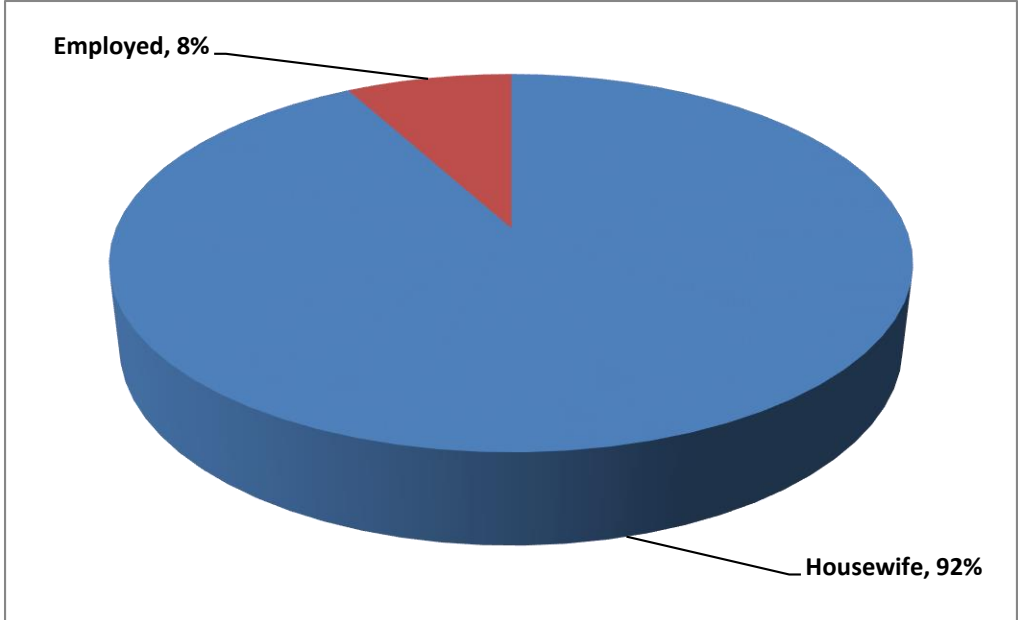
Respondents' completed years of schooling has shown in the above graph. From the result it was found that 18.80% respondents completed 0-4 years of schooling, 29.10% respondents completed 5-8 years of schooling, 23.20% respondents completed 9-12 years of schooling and 28.90% respondents completed 13 and above years of schooling.



Source: Field survey, 2022

Husband's completed years of schooling has shown in the above graph. From the result it was found that 26% respondents' husband completed 0-4 years of schooling, 20.60% respondents' husband completed 5-8 years of schooling, 22.90% respondents' husband completed 9-12 years of schooling and 29.90% respondents' husband completed 13 and above years of schooling.

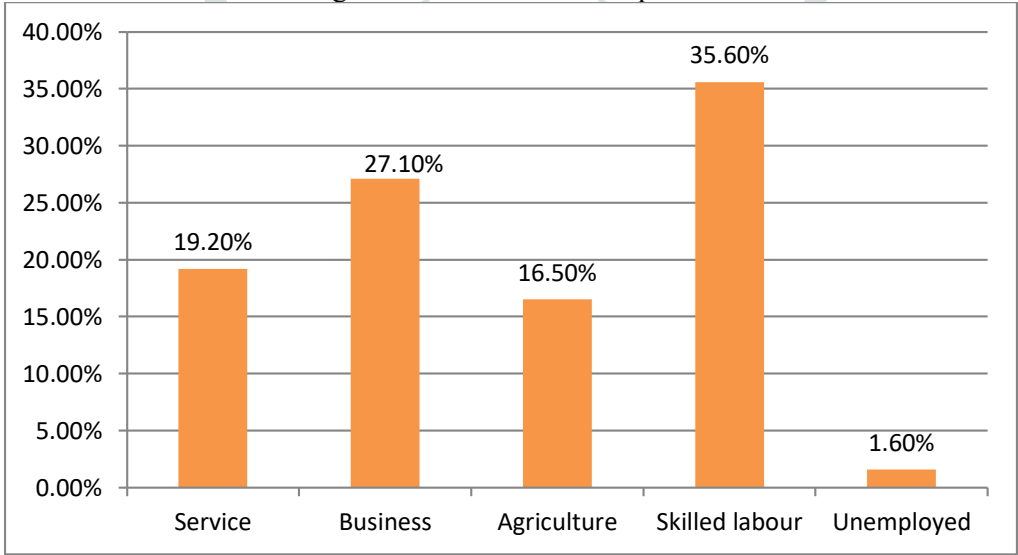
Figure 4: Occupation of the Respondents



Source: Field survey, 2022

Occupation of the Respondents has shown in the above graph. From the result it was found that 8% respondents were employed and 92% respondents were housewife.

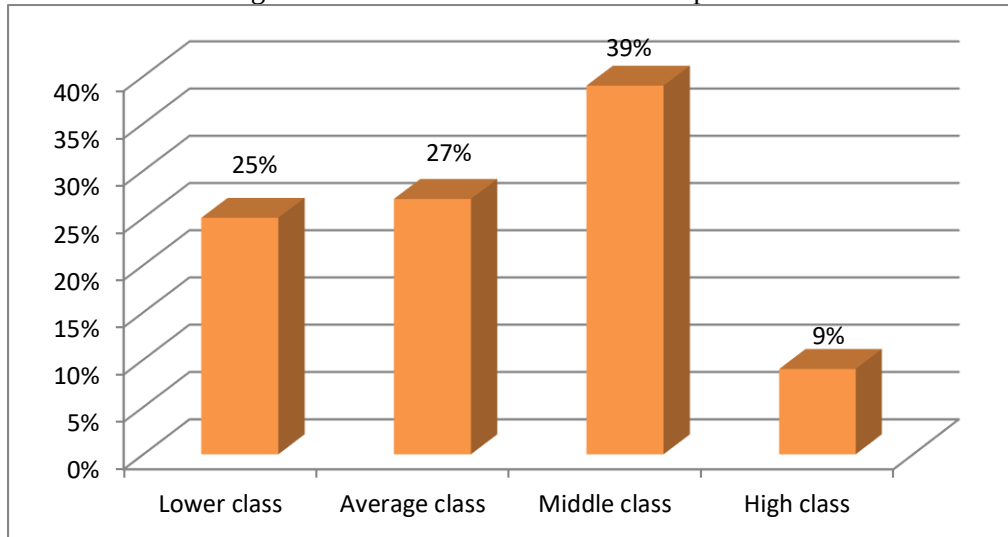
Figure 4.5: Husband’s Occupation



Source: Field survey, 2022

Husband’s Occupation has shown in the above graph. From the result it was found that 19.20% respondents’ husband were service holder, 27.10% respondents’ husband were businessmen, 16.50% respondents’ husband were related to agriculture, 3.60% respondents’ husband were skilled labour and only 1.60% respondents’ husband were unemployed.

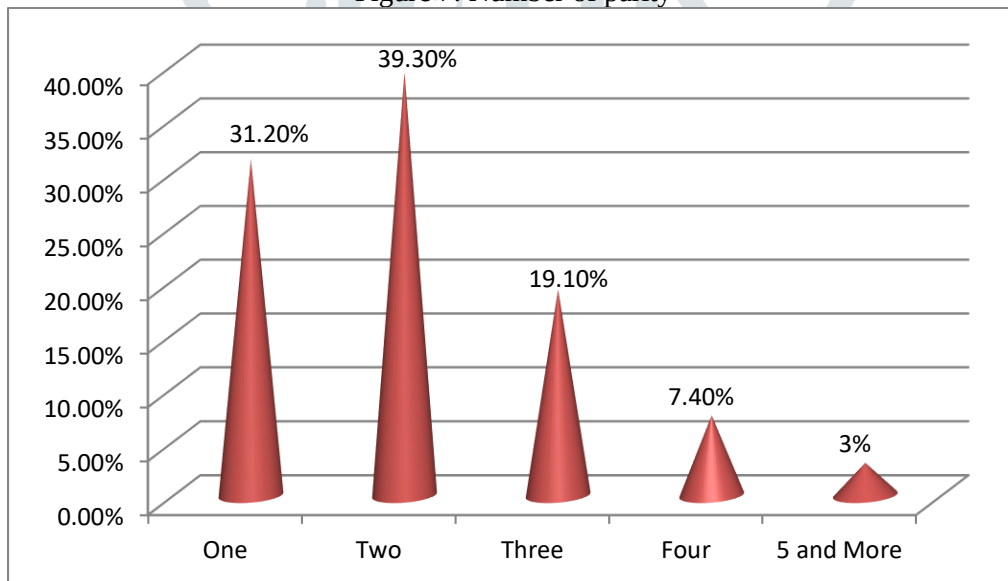
Figure 6: Economic condition of the respondents



Source: Field survey, 2022

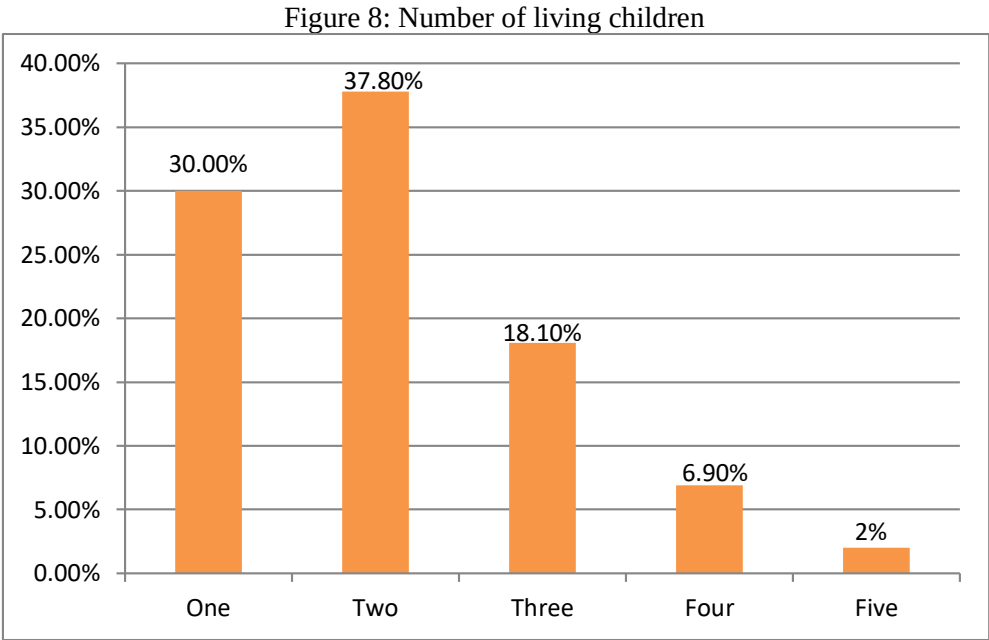
Economic condition has shown in the above graph. From the result it was found that 25% respondents were from lower class, 27% respondents were from average class, 39% respondents were from middle class and 9% respondents were from high class.

Figure 7: Number of parity



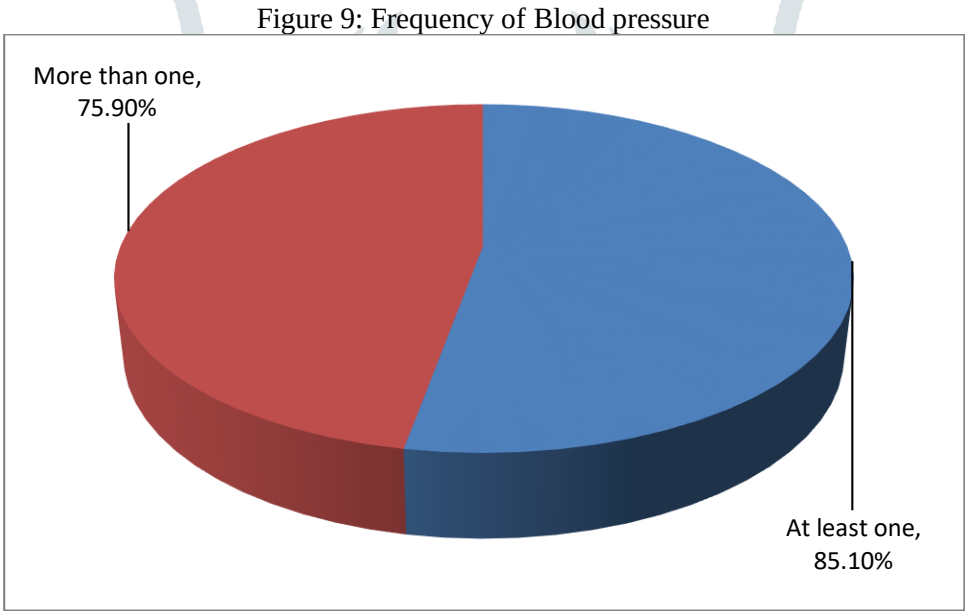
Source: Field survey, 2022

Number of parity has shown in the above graph. From the result it was found that 31.20% respondents had one parity, 39.30% respondents had two parity, 19.10% respondents had three parity, 7.40% respondents had four parity and 3% respondents had 5 and more parity.



Source: Field survey, 2022

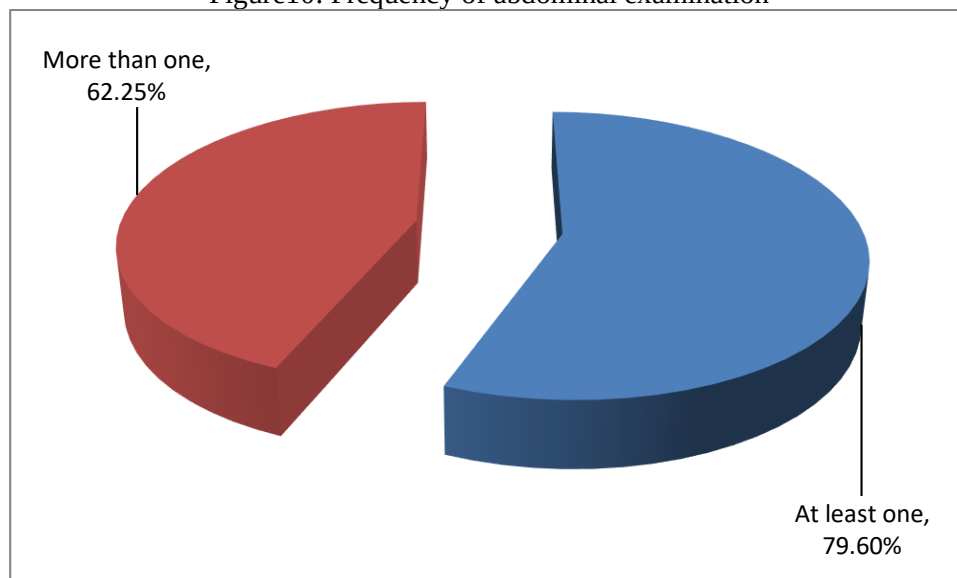
Number of living children has shown in the above graph. From the result it was found that 30.00% respondents had one living child, 37.80% respondents had two living children, 18.10% respondents had three living children, 6.90% respondents had four living children and 2% respondents had five living children.



Source: Field survey, 2022

Frequency of Blood pressure has shown in the above graph. From the result it was found that 75.90% respondents replied that the frequency of blood pressure were more one time and 85.10% respondents replied that the frequency of blood pressure were at least one.

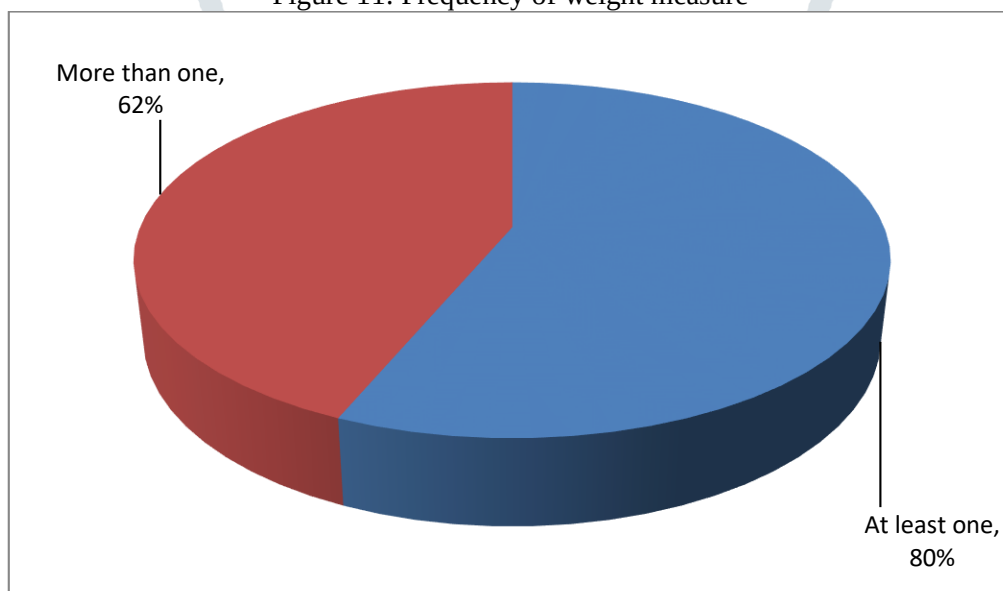
Figure10: Frequency of abdominal examination



Source: Field survey, 2022

Frequency of abdominal examination has shown in the above graph. From the result it was found that 62.25% respondents replied that the abdominal examination done more than one time and 79.60% respondents replied that the abdominal examination don at least one.

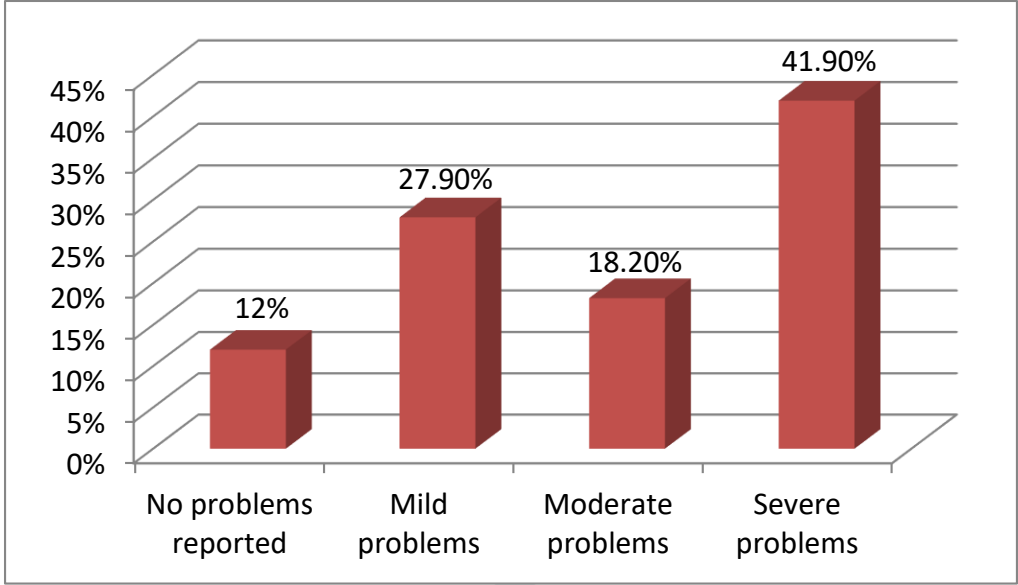
Figure 11: Frequency of weight measure



Source: Field survey, 2022

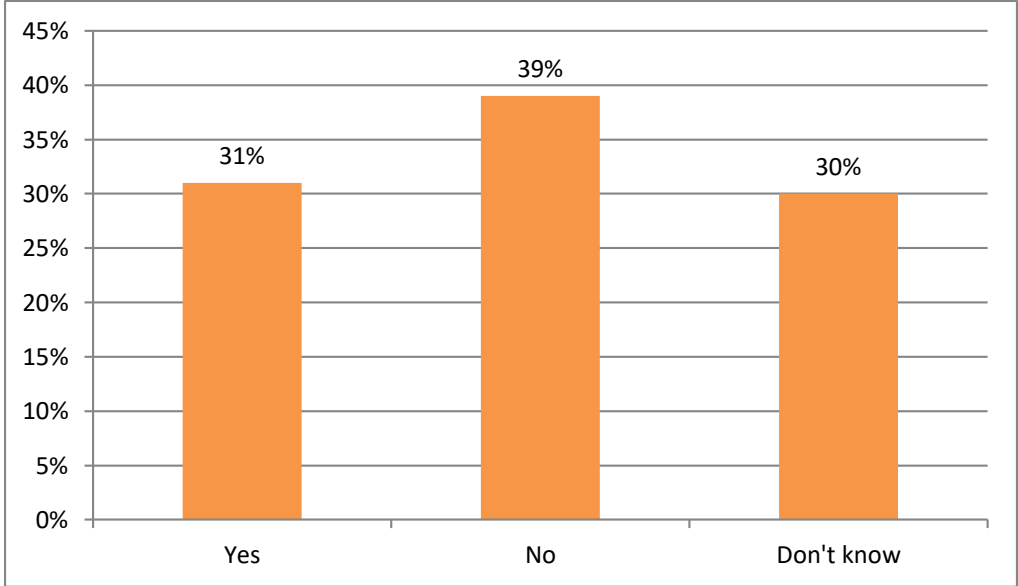
Frequency of weight measure has shown in the above graph. From the result it was found that 62% respondents measured weight more than one time and 80% respondents measured weight at least one time.

Figure 12: Pregnancy complications during last pregnancy



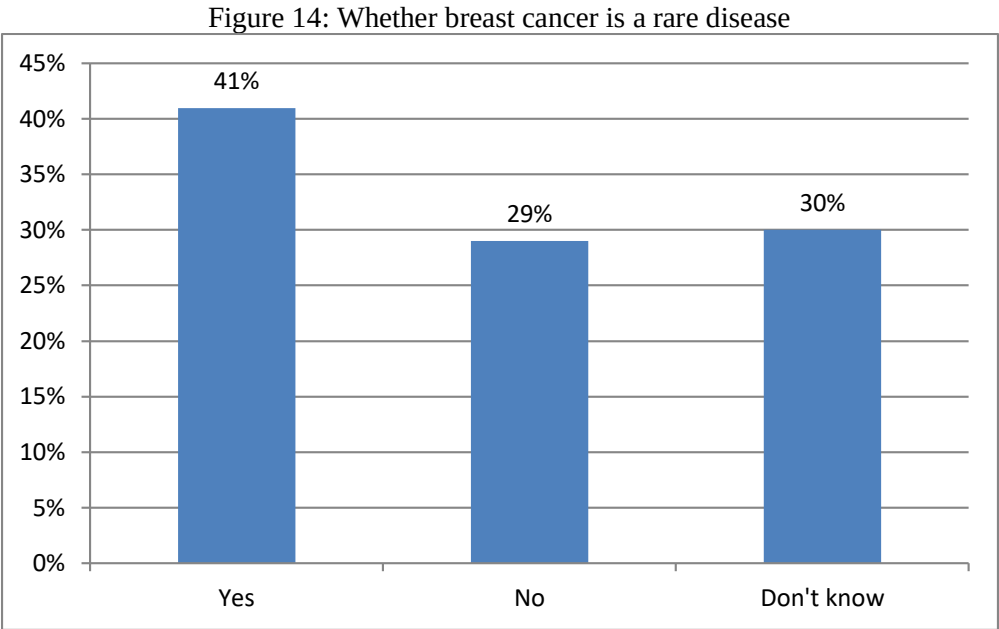
Pregnancy complications during last pregnancy has shown in the above graph. From the result it was found that only 12% respondents replied no problems during last pregnancy, 27.90% respondents faced mild problems during last pregnancy, 18.20% respondents faced moderate problems during last pregnancy and 41.90% respondents faced severe problems during last pregnancy.

Figure 13: Heard about breast cancer



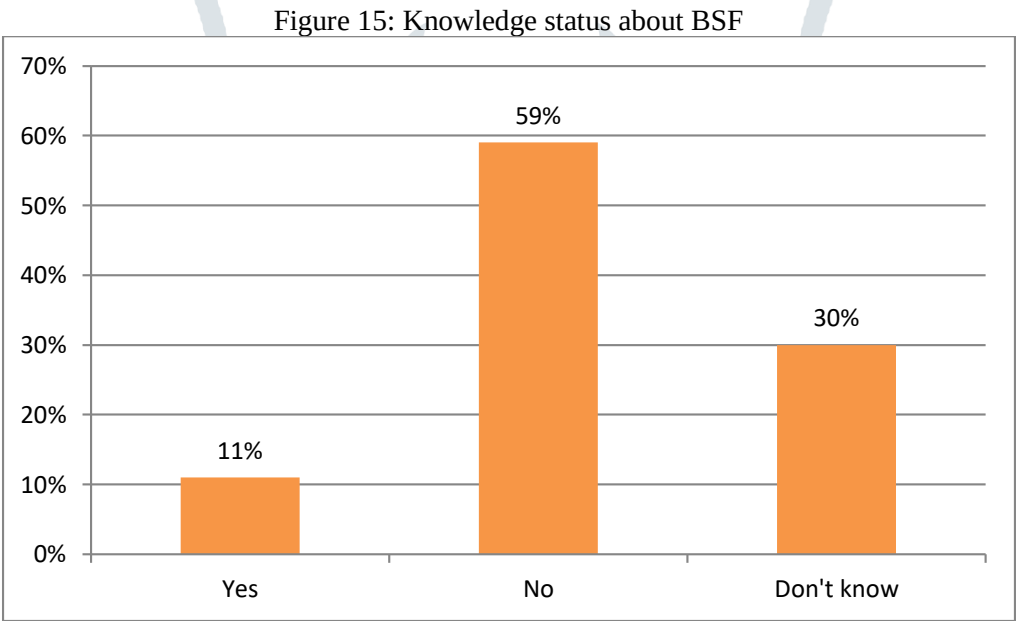
Source: Field survey, 2022

Heard about breast cancer has shown in the above graph. From the result it was found that 39% respondents replied that they did not hear about breast cancer, 31% respondents replied that they heard about breast cancer and 30% respondents replied that they don't know about breast cancer.



Source: Field survey, 2022

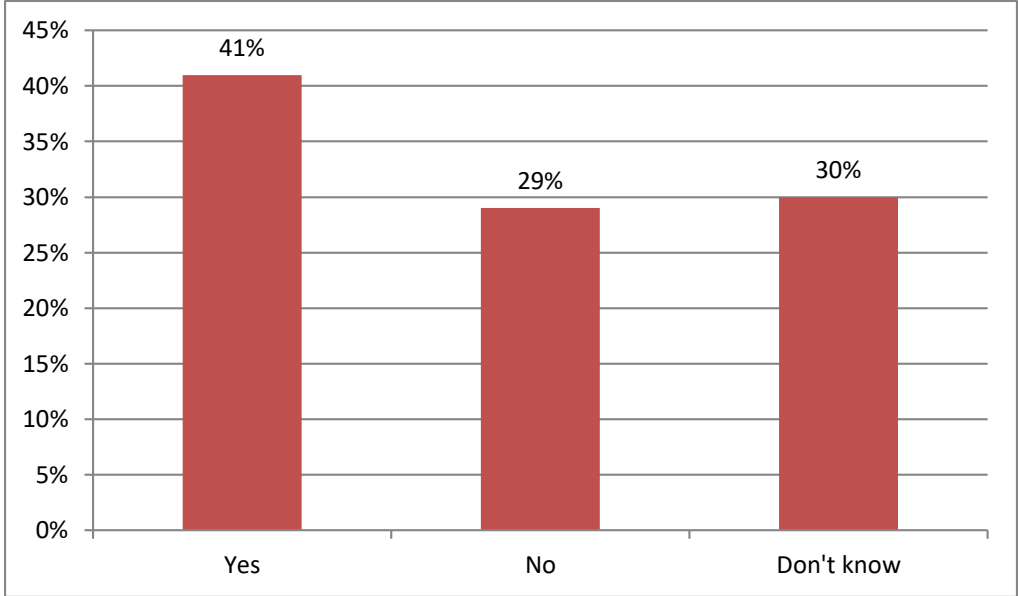
Whether breast cancer is a rare disease has shown in the above graph. From the result it was found that 41% respondents replied that the breast cancer is a rare disease, 29% respondents replied that the breast cancer is not a rare disease and 30% respondents replied that they don't know about breast cancer.



Source: Field survey, 2022

Knowledge status about BSF has shown in the above graph. From the result it was found that respondents replied that they 11% respondents replied that they know about BSF, 59% respondents replied that they did not know about BSF and 30% respondents replied that they don't know about BSF.

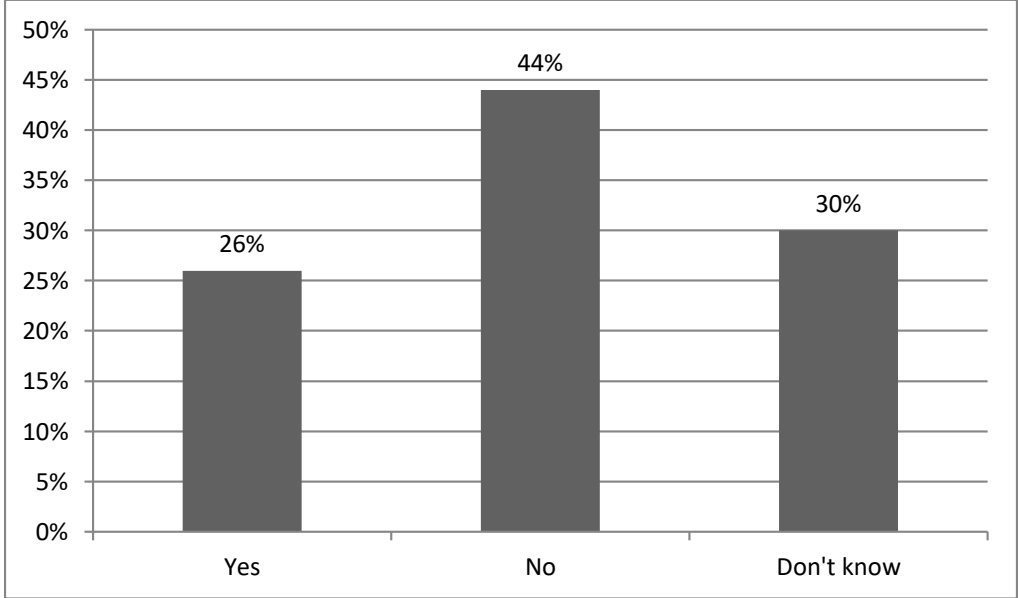
Figure 16: BSE is a useful tool for early detection of breast cancer



Source: Field survey, 2022

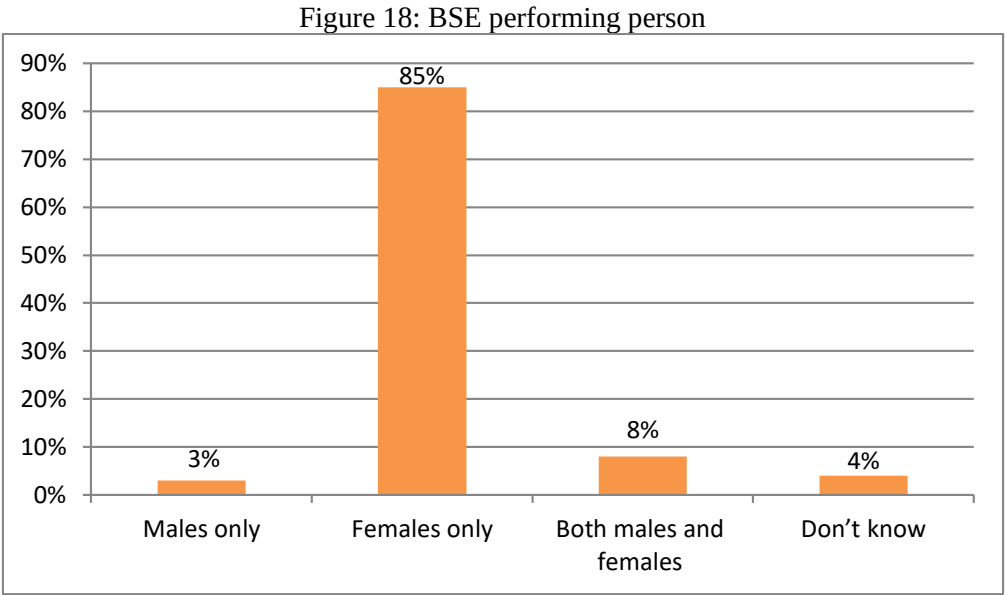
BSE is a useful tool for early detection of breast cancer has shown in the above graph. From the result it was found that 41% respondents replied that BSE is a useful tool for early detection of breast cancer, 29% respondents replied that BSE is not a useful tool for early detection of breast cancer and 30% respondents replied that they don't know about BSF.

Figure 17: Heard about Breast screening programs



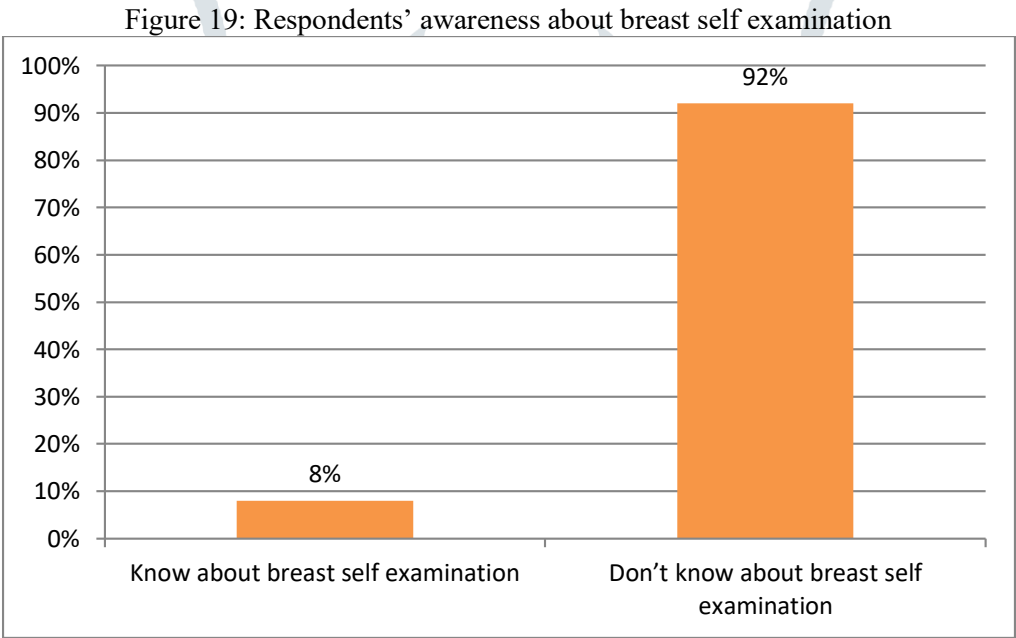
Source: Field survey, 2022

Heard about Breast screening programs has shown in the above graph. From the result it was found that 26% respondents replied that they heard about Breast screening programs , 44% respondents replied that they did not heard about Breast screening programs and 30% respondents replied that they don't know about BSF.



Source: Field survey, 2022

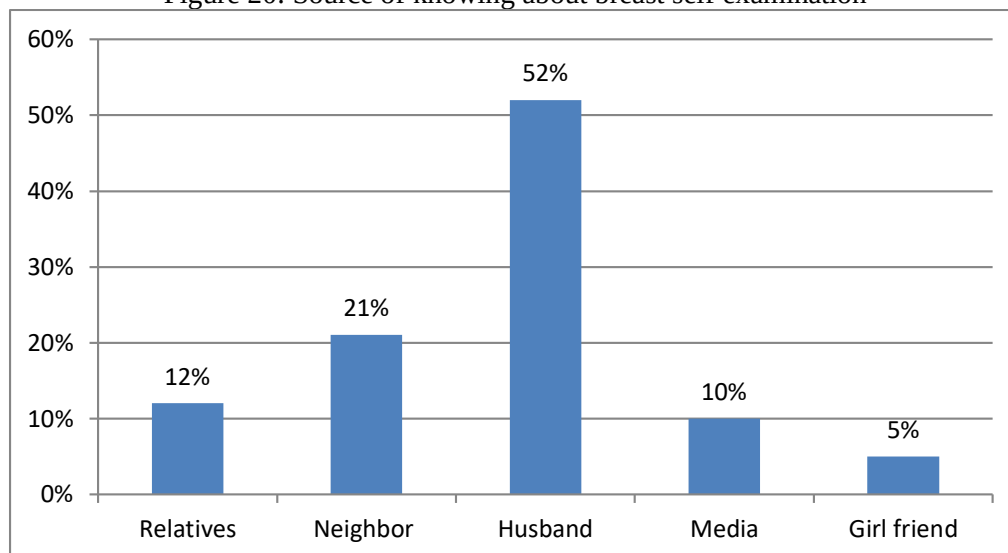
BSE performing person has shown in the above graph. From the result it was found that only 3% respondents replied that BSR performing person should be male only, 85% respondents replied that BSE performing person should be female only, 3% 8% respondents replied that BSE performing person should be both males and female and 4% respondents did not know about BSE performing person.



Source: Field survey, 2022

Respondents' awareness about breast self examination has shown in the above graph. From the result it was found that 8% respondents know about breast self examination and 92% respondents don't know about breast self examination.

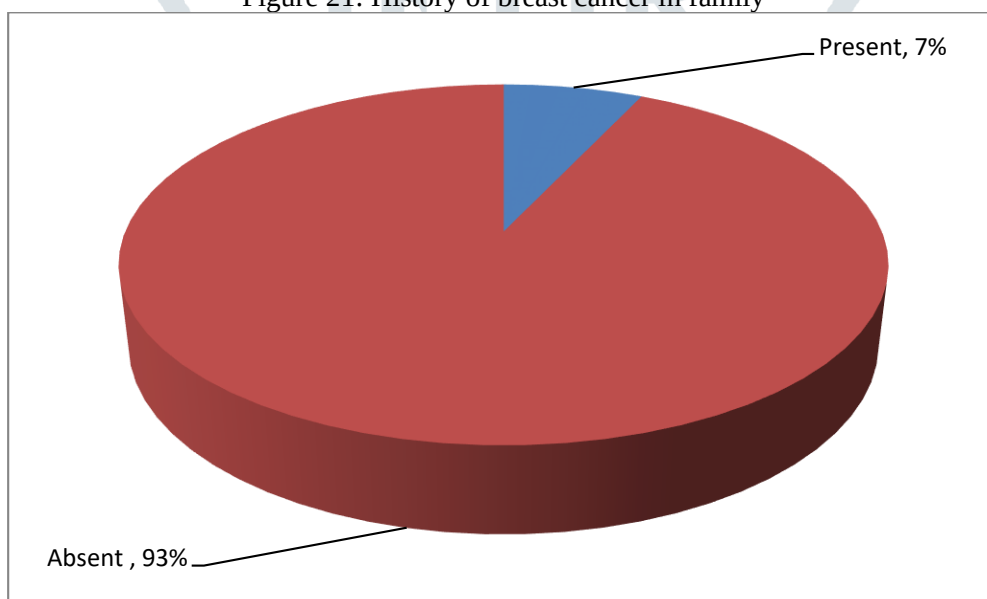
Figure 20: Source of knowing about breast self examination



Source: Field survey, 2022

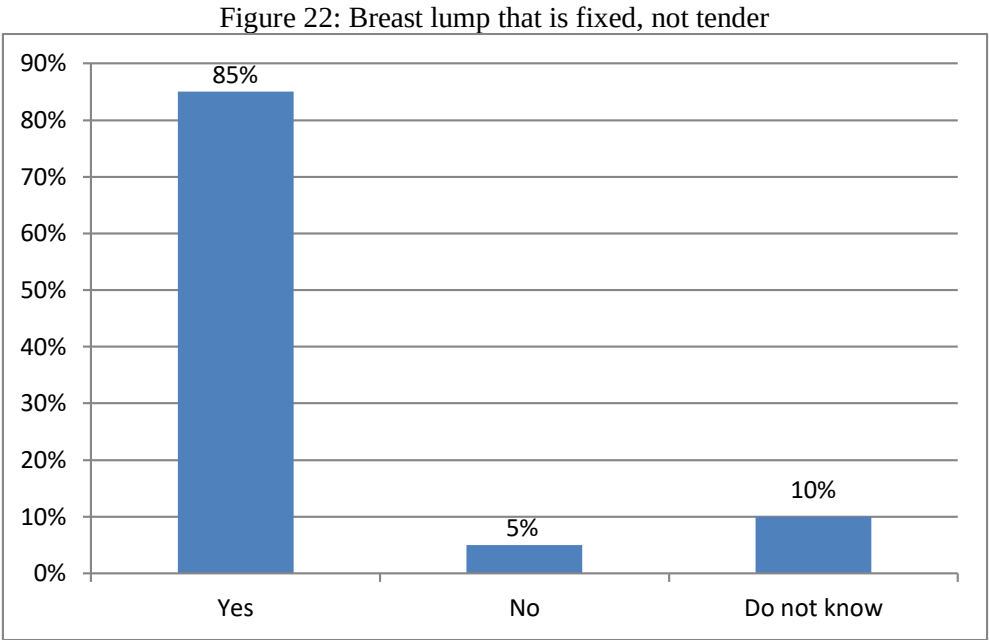
Source of knowing about breast self examination has shown in the above graph. From the result it was found that 12% respondents knew BSE from relatives, 21% knew from neighbor, 52% knew from husband, 10% knew from media and 5% knew from girl friend.

Figure 21: History of breast cancer in family



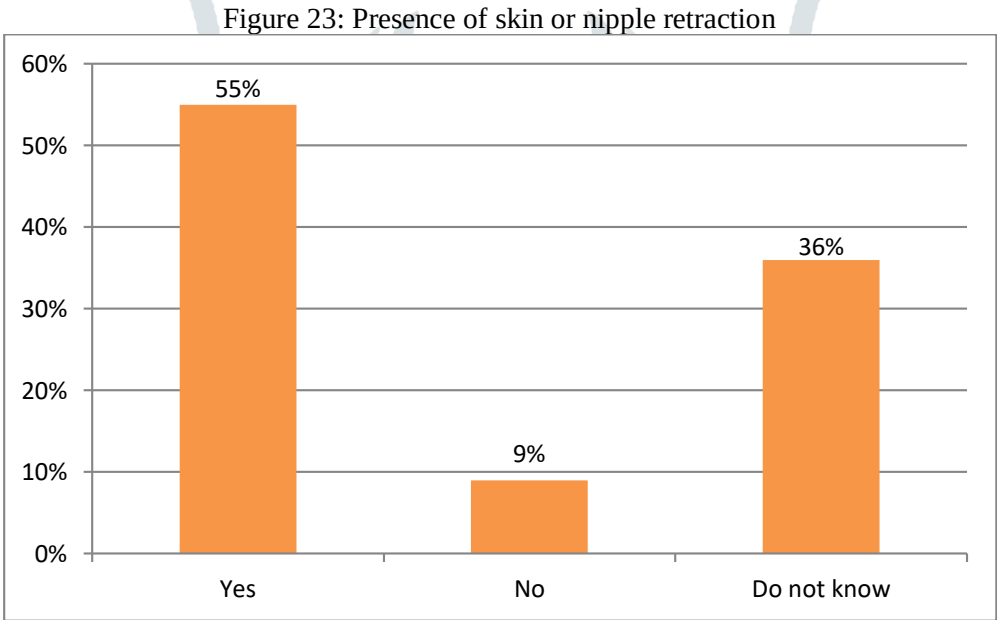
Source: Field survey, 2022

History of breast cancer in family has shown in the above graph. From the result it was found that 7% respondents had family history of breast cancer and 92% had no family history of breast cancer.



Source: Field survey, 2022

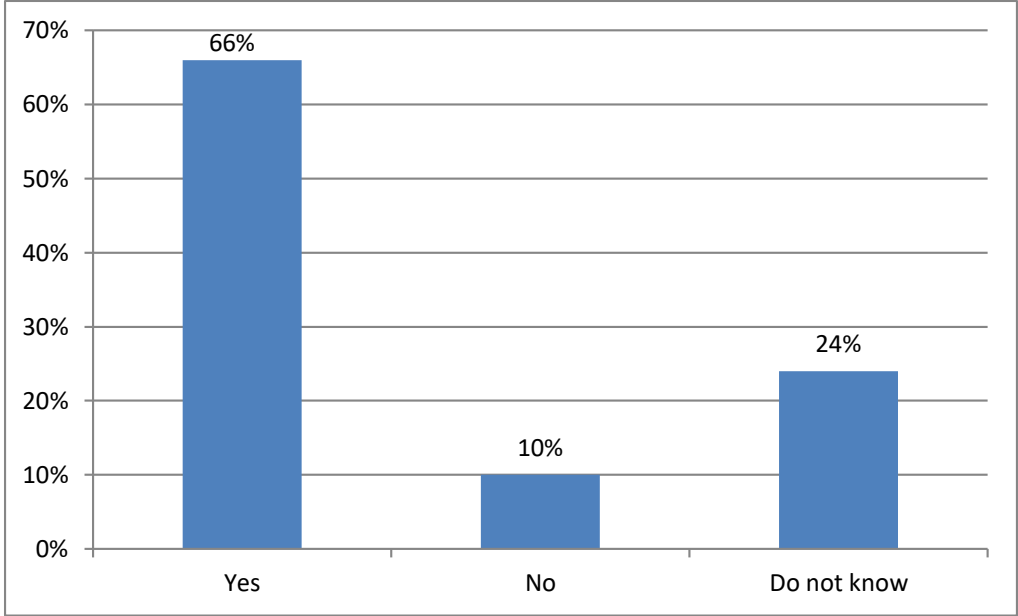
Breast lump that is fixed, not tender has shown in the above graph. From the result it was found that 85% respondents replied that breast lump that is fixed, not tender, 5% respondents replied that breast lump is tender and 10% did not know about breast lump.



Source: Field survey, 2022

Presence of skin or nipple retraction has shown in the above graph. From the result it was found that 55% respondents replied that skin or nipple retract is present, 9% respondents replied that skin or nipple retract is not present and 36% respondents they do not know about skin or nipple retract.

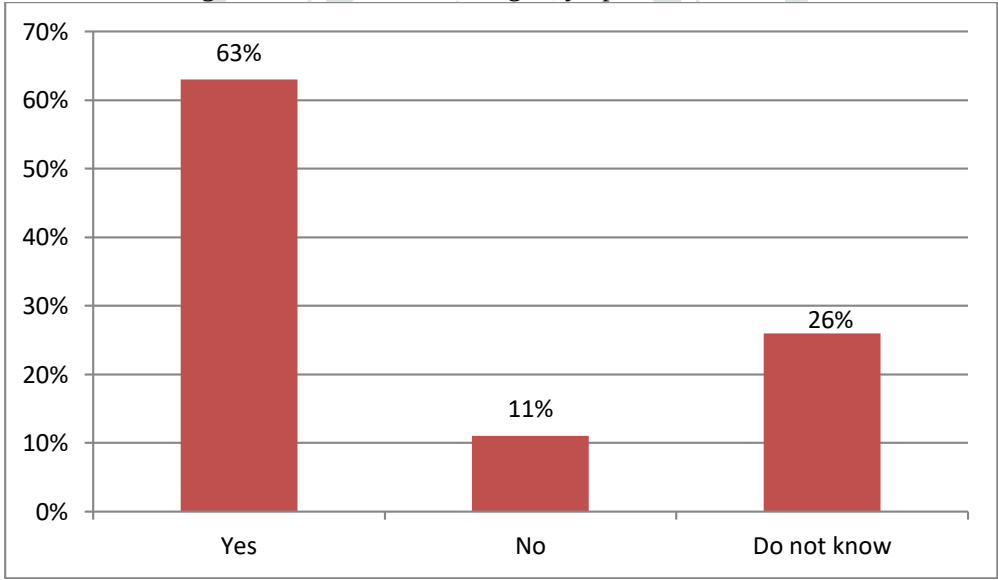
Figure 24: Presence of nipple discharge in a non-lactating woman



Source: Field survey, 2022

Presence of nipple discharge in a non-lactating woman has shown in the above graph. From the result it was found that 66% respondents replied that nipple discharge in a non-lactating woman is present, 10% respondents replied that nipple discharge in a non-lactating woman is not present and 24% respondents they do not know about nipple discharge in a non-lactating woman

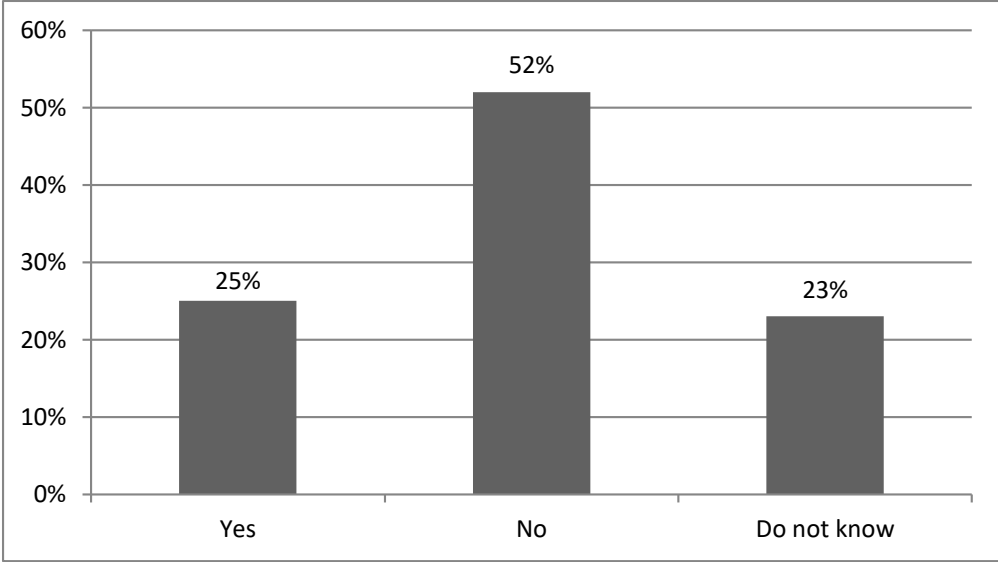
Figure 25: Presence of enlarged lymph nodes in axillae



Source: Field survey, 2022

Presence of enlarged lymph nodes in axillae has shown in the above graph. From the result it was found that 63% respondents replied that enlarged lymph nodes in axillae is present, 11% respondents replied that enlarged lymph nodes in axillae is not present and 26% respondents they do not know about enlarged lymph nodes in axillae.

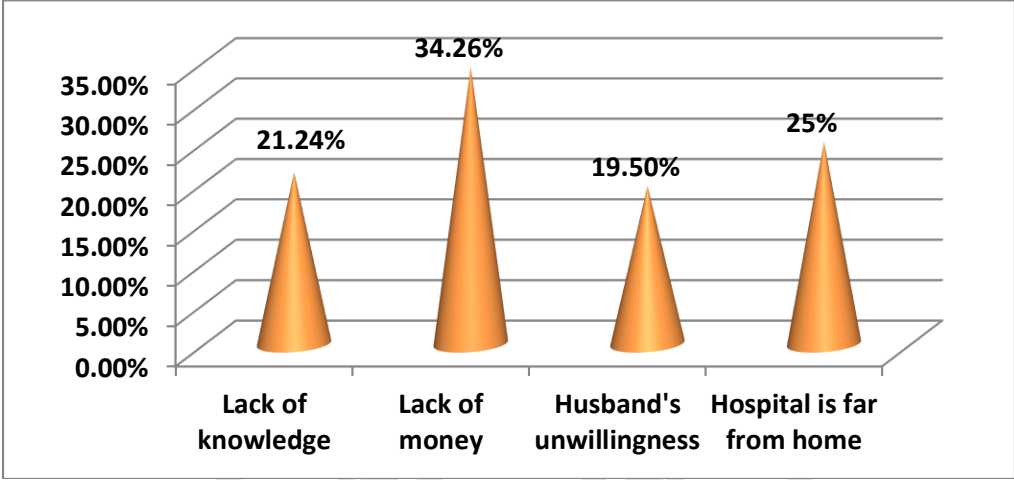
Figure 26: Presence of small pimple on the breast



Source: Field survey, 2022

Presence of small pimple on the breast has shown in the above graph. From the result it was found that 25% respondents replied that small pimple on the breast is present, 52% respondents replied that small pimple on the breast is not present and 23% respondents they do not know about small pimple on the breast.

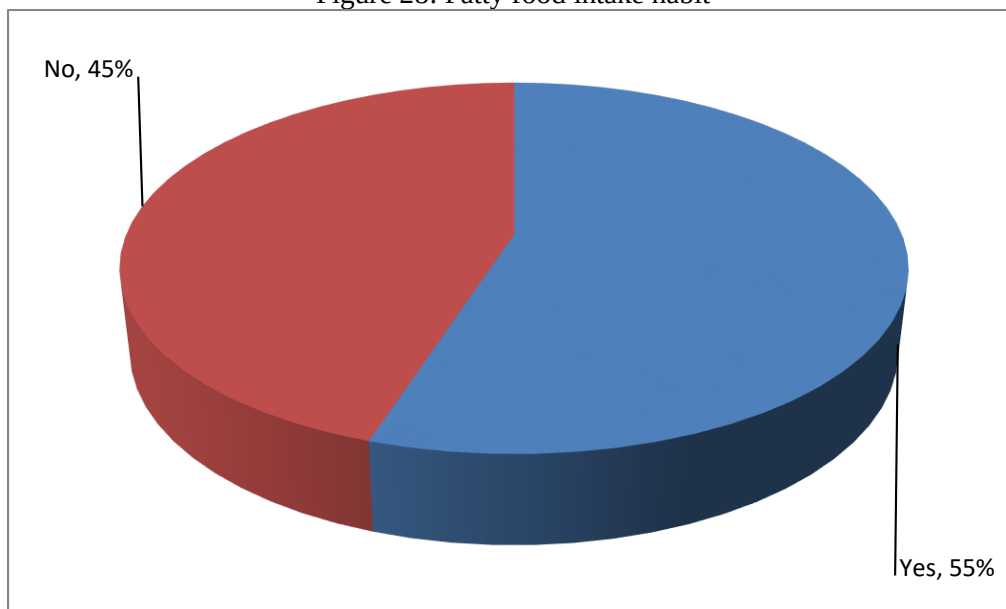
Figure 27: Reason of low breast examination



Source: Field survey, 2022

Reason of low breast examination has shown in the above graph. From the result it was found that 34.26% respondents replied that they did not examine breast due to lack of money which was maximum but only 19.50% respondents replied that they did not examine breast due to husband’s unwillingness about examine breast of respondents which was minimum. On the other 21.24% respondents replied that they did not examine breast due to lack of knowledge about examine breast and 25% respondents replied that they did not examine breast because the hospital is far from respondents home.

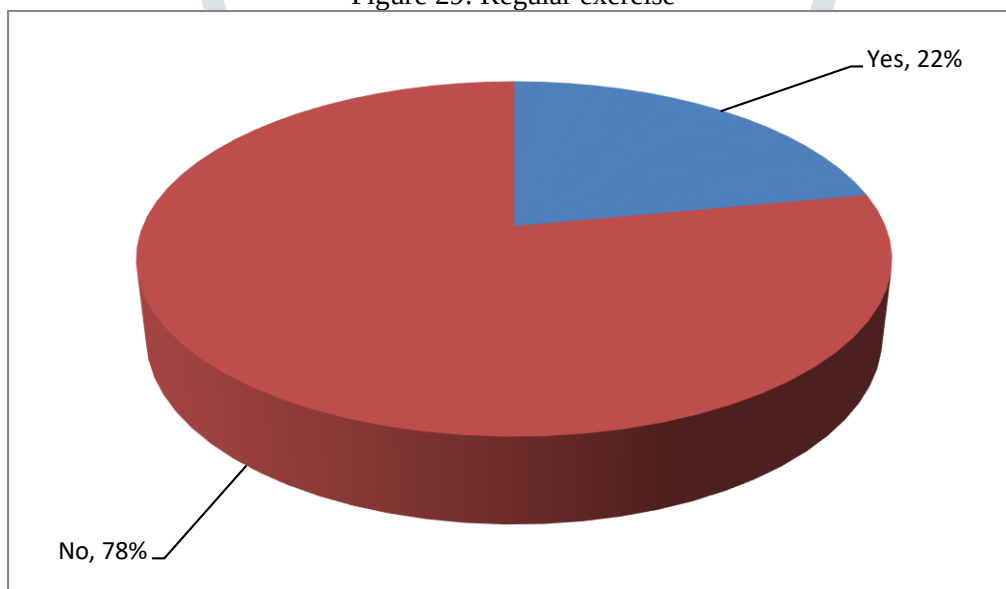
Figure 28: Fatty food intake habit



Source: Field survey, 2022

Fatty food intake habit has shown in the above figure. From the result it was found that 55% respondents had habit to intake fatty food but 45% respondents had no habit to intake fatty food.

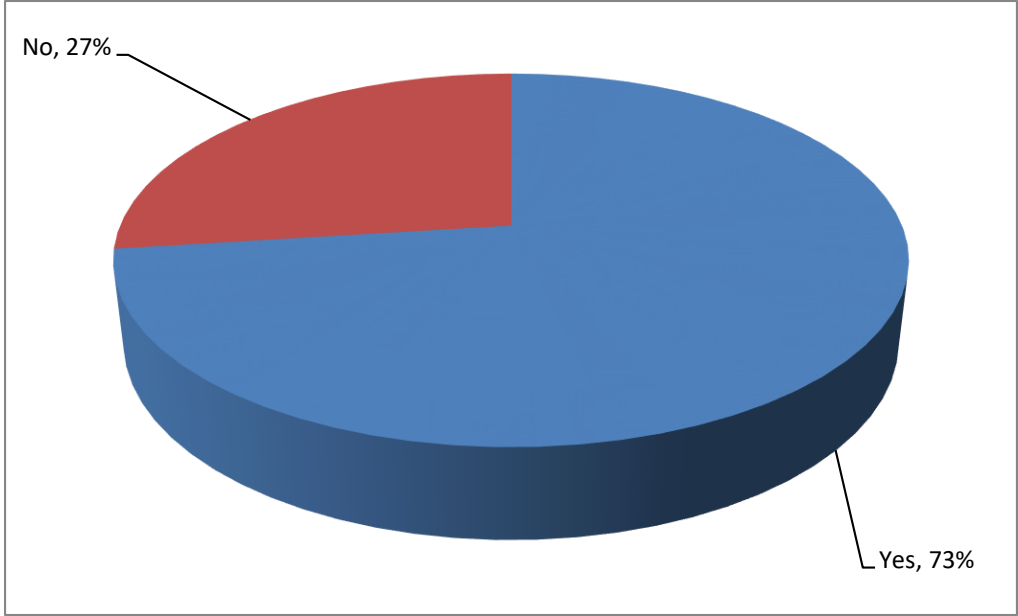
Figure 29: Regular exercise



Source: Field survey, 2022

Regular exercise status of the respondents has shown in the above figure. From the result it was found that 22% respondents had habit of regularly exercise but 78% respondent had no habit of regularly exercise.

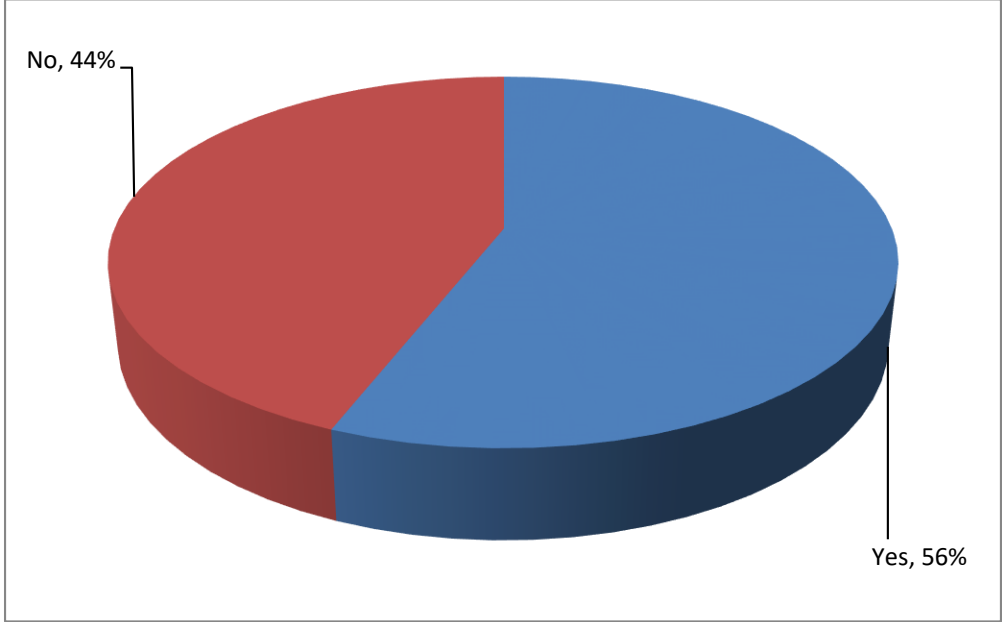
Figure 30: Family history of breast cancer



Source: Field survey, 2022

Family history has shown in the above figure. From the result it was found that 73% respondents had family history and 27% respondents had no family history of breast cancer.

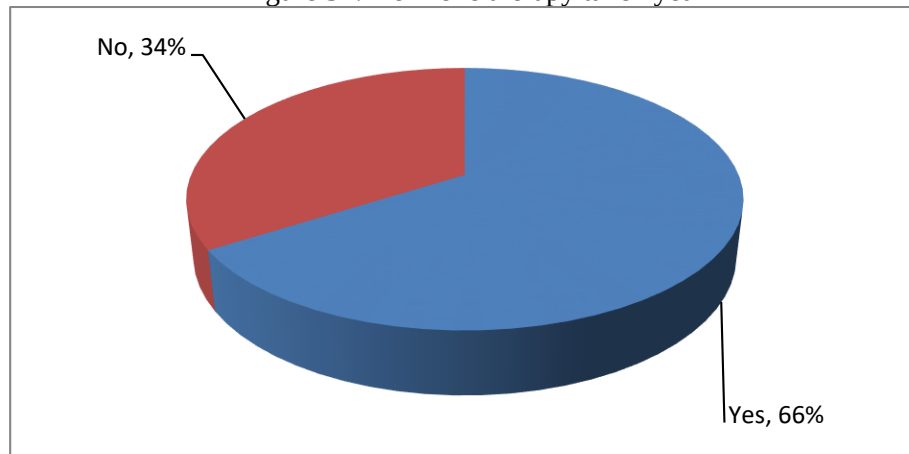
Figure 31: Whether menarche start early



Source: Field survey, 2022

Whether menarche start early has shown in the above figure. From the result it was found those 56% respondents menarche started early but 44% respondents menarche did not started menarche early.

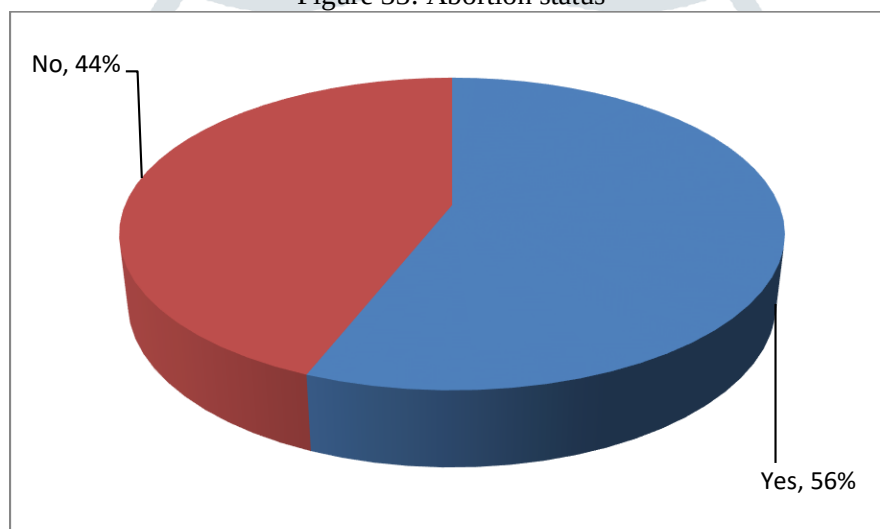
Figure 32: Hormone therapy taken yet



Source: Field survey, 2022

Status of hormone therapy taken has shown in the above figure. From the result it was found that 66% respondents took hormone therapy but 34% respondents did not take hormone therapy.

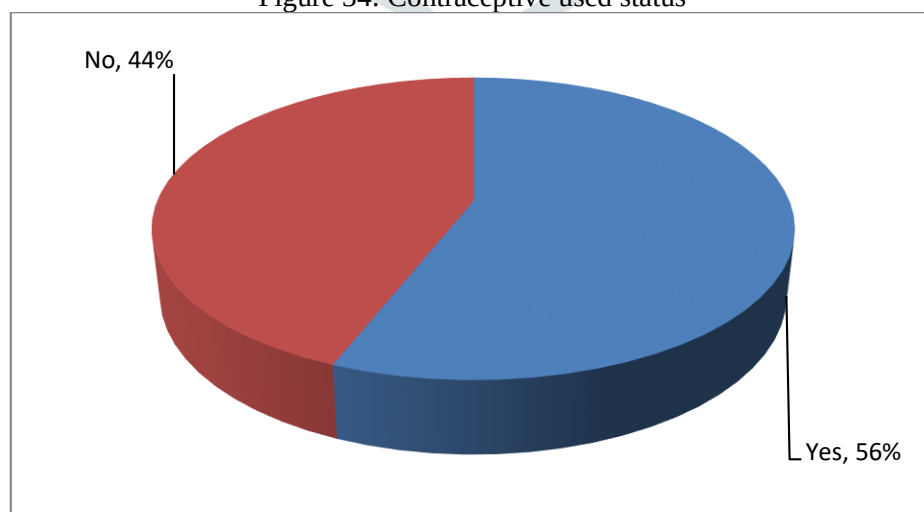
Figure 33: Abortion status



Source: Field survey, 2022

Abortion status has shown in the above figure. From the result it was found that 56% respondents had history abortion but 44% respondents had no history of abortion.

Figure 34: Contraceptive used status



Source: Field survey, 2022

Contraceptive used status of the respondents has shown in the above figure. From the result it was found that 56% respondents used contraceptive but 44% respondents did not use contraceptive.

Table 1: Reasons of not breast screening

Reasons	Percent
Had no symptoms	81%
Didn't know necessity of screening	42%
Expensive	39%
Embarrassing nature of diagnosis	55%
Lack of information about breast cancer	32%
Didn't know where to go	19%
Fear of diagnostic test and result	36%
Family didn't allow to go	92%
No accompany to go for screening	25%

Reasons of not screening of breast cancer have shown in the above figure. From the result it was found that 81% women replied that they did not do breast screening because they had no symptoms of breast cancer, 42% replied they didn't know necessity of screening, 39% replied expensive, 55% replied embarrassing nature of diagnosis, 32% replied lack of information about breast cancer, 19% didn't know where to go, 36% replied fear of diagnostic test and result.

CONCLUSION

In conclusion, the rate of breast cancer screening practice among young females and women in Bangladesh is low and there are some barriers for doing breast cancer screening among this group. But as this group is an educated group and has positive attitudes toward learning breast cancer screening and breast self examination from practice instructors, it is recommended to promote public breast health awareness campaigns through the media. Also, it is mandatory to establish or improve nationwide policy guidelines to increase the dissemination of information about breast cancer, the importance of breast self examination and other screening methods for controlling breast cancer among young females in Bangladesh.

Our results indicate that an increase in breast cancer screening and breast self examination practice and recommendations for mammograms may be achieved through enhancement of breast cancer awareness and possibly by reducing barriers. By using the proper methods constructs for assessment, primary health care providers can gain an understanding of the beliefs that influence women's breast self examination and mammography practice. That of the most of the women that reported ever hearing or reading about breast cancer, the few mentioned TV/radio as their main source of information underscores the potential effectiveness of the media in modifying health behaviour. Health professionals were mentioned as a source of information the samples. So, the role of health care workers as an information source in breast cancer should be increased. Further research is recommended using a larger sample size with women in rural and urban areas, including the cost-effectiveness of designing and implementing preventive care.

The study confirmed the importance of doctors in equipping patients with the correct information on women's health, breast cancer and breast self examination practice. The respondents expressed satisfaction that information obtained from the study would contribute to health education given to women to improve breast cancer and breast examination practice.

RECOMMENDATIONS

Based on the results, the researcher makes the following recommendations for practice and further research.

In order to bridge the gap between knowledge and practice of breast cancer, all women should ensure that all women are educated on proper breast cancer and breast cancer practice. The Ministry of Health and family welfare should design and implement an intensive health education programme for schools, colleges, madrasa, universities, hospitals and clinics.

Educational materials such as posters and leaflets should be freely available at public places, educational institutions, public transports, bus stands, railway stations, hospitals and clinics to facilitate awareness regarding breast cancer and breast self examination.

Even myths about examine breast and uncomfortable in sharing such issues have been seen in this study. Young females as well as women of all age should be educated about awareness of breast cancer and breast self examination and practice of breast cancer screening.

Knowledge about breast cancer and breast self examination should be given specially to young females for early detection of any abnormalities in breast and breast cancer further. Awareness and knowledge seems to play vital role in early detection of breast cancer.

Women are at risk of harm from breast cancer and breast self examination including unnecessary breast biopsies, imaging tests and emotional duress (Hackshaw and Paul 2003).

Breast self-examination (BSE) might still be an important tool to improve breast awareness. Women are encouraged to take responsibility for their own health by taking opportunities such as during bathing or dressing to become familiar with their breasts at different times of the month and with age, looking and feeling for any changes from normal, and reporting any obvious changes promptly.

Appropriate educational interventions are needed to encourage women to engage in regular breast awareness as well as to practice breast self examination.

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