







Do you have clinical breast examination (CBE) before?					
Yes					
No	59(38.5%)	9(10%)	12(21%)	24.	0
	94(61.5%)	81(90%)	45(79%)		S
Did you perform Mammogram?					
Yes	35(22.8%)	16(17.7%)	8(14%)	2.4	0.31
No	118(77.2%)	74(82.3%)	49(86%)		NS
Mammogram is necessary for early detection of breast					
Yes					
No	137(89.5%)	72(80%)	42(73.6%)	8.9	0.01
Don't know	16(10.5%)	18(20%)	15(26.4%)		S
	0	0	0		

#### 4. Results

**Table 1** showed that the majority of the sample was aged 36-45 years old (29.7%), living in urban area (81.75), Employee (51%), educated (90%) and married (71%), regard age at menarche between 12 and 14 years old (68.3%), majority of sample bearing their first baby before age 30 years, and 112(37.3%) agree that late age of married increases the probability of breast cancer. knowledge of risk factors of breast cancer are included in **Table 2**. Majority of participants had good knowledge about breast cancer risk factors with percentages of (93.3%).

**Table 3** highlighted that there was no statistical significance difference between employee, house wife, and students regarding awareness of breast cancer risk factors:  $P \geq 0.05$ .

Participants' knowledge about breast Self-Examination is presented in **Table 4**. Most of respondent agreed that BSE important (87%), (74.7%) mentioned that they heard about BSE, Television /radio or news paper followed by breast cancer campaigns are main source of knowledge about BSE, (33.7%, 29%, respectively). Most of participants told that female only perform BSE, (52%), but less than one half (46.7%, ) of participants reported both male and female .Most of the participants reported age at which BSE should begin is more than 25 years (69.3%), Seventy-five per cent of women reported that the frequency of performing BSE was monthly, Also 39.7% palpate with four fingers.

**Table 5** demonstrates Participants' knowledge about Clinical breast examination (CBE). Most participants reported that they did not perform any breast exam before (73.3%), but 26.7% perform breast exam. Among previous group CBE was done by doctor, one time and done for follow up, complain from lump/pain (21%, 18% and 20.7%, 17%, respectively). But the group told no done half of this group reported that no pain or swelling (50%), but 12.3% reported lack of knowledge about CBE.

Participants' knowledge about mammogram is presented in **Table 6**: most of women were not perform mammogram (80.3%), however, 19.7% reported that they performed mammogram. Among first group (16.7%) of them performed mammogram for one time, due to fear from breast cancer, diagnosis/requested and follow up, (18.7%, 13.3% and 12%, respectively)

**Table 7** shows statistical significance difference between employees, house wives, and students regarding hearing about breast self examination and importance of BSE ( $P \leq 0.000$ ). In addition, there is a statistical significance between these three occupation categories regarding performing clinical breast examination and they believe that mammogram is necessary for early detection of breast cancer.  $P \leq 0.01$ . However, the difference was not significant regarding performing mammogram.  $P \geq 0.31$ .

#### 5. Discussion

Incidence rates of breast cancer are rising and mortality rates are proportionally high in Arab countries compared to rates in developed countries. The common late diagnosis among Arab women has been related to the low participation rates of Arab women in breast cancer screening activities [27].

The present study aimed to assess the levels of breast cancer awareness among Saudi females and to compare between house wives and employees women regarding knowledge and practical of breast cancer. Majority of participants in this study were between age 16 to 45, came from urban area, educated, employee and house wife, married, and age of menarche was between 12 to 14 years. This study supported a study done by Al Diab et al. [28] who reported that, majority of their respondents were in age between 20 to 50 years, educated and married.

In our study majority of participants showed good knowledge regarding risk factors of breast cancer (93.3%), family history, contraceptive hormones, wearing tight bra, obesity, late menopause, and bearing the first child after age 30 years, , (75%, 71.7%, 63.7%, 55.3%, 43.7%, 41.3%, respectively ).

Most participants agreed that family history is the most important risk factor of breast cancer (75%), followed by bearing the first children after age 30 years (41.3%). No statistical significance difference between employees, house wife and students regarding knowledge of risk factors of breast cancer ( $P > 0.05$ ). This result may be due to the fact that in recent years, Ministry of Health, Taif – City has intensified its campaign to promote breast cancer awareness and screening among women to decrease the prevalence of breast cancer in the city. They are primarily focusing on the younger generation to fight against breast cancer and has recommended regular practice of BSE for early detection, reporting and treatment of this type of cancer. On the other hand, electronic media such as radio and TV was the most common source of information of BC. This study concurred with Aljunaibi et al [29] who reported that, the study participants were having better knowledge of common symptoms of breast cancer (71.97%-92.36%) than the risk factors (49.68% - 86.62%). Also this result is similar to the results of another study conducted in Malaysia [30]. The most broadly known risk factor among participants was family history (86.62%), which is consistent with a cross-sectional study of knowledge and belief regarding breast cancer conducted among British women, Grunfeld et al [31] but higher than the results of a study conducted in Yemen [32].

Dandash and Mohamed, <sup>[16]</sup> conducted a study in Saudi Arabia reported that the majority of participants (57.5%) knew about family history and having a close relative with breast cancer as established risk factors for the disease, also (41.0% and 35.5%) of participants were aware of alcohol drink and hormone replacement therapy as other risk factors of breast cancer respectively. In addition, Radi <sup>[19]</sup> highlighted that, knowledge of other risk factors of breast cancer was limited as only few females knew that late menopause (18.5%), early menarche (17.0%) and lack of physical exercise (15.5%) are risk factors of breast cancer.

Regarding breast self examination awareness the majority of the study sample had awareness about importance of BSE which helped early detection of breast cancer. Most of participants heard about BSE from TV and breast cancer awareness campaigns (74.7%, 33.6% and 29%, respectively), 52% reported that female only should perform BSE, followed by 46.7%, reported both male and female, 69.3% should perform after 25 years and done monthly (75.3%).

Regarding the technique 39.7% use four fingers to examine the breast. There was a statistical significance difference between employees, house wife and students regarding knowledge of BSE and importance of BSE ( $P < 0.05$ ). These findings are congruent with previous studies investigating awareness and knowledge of breast cancer and practices of breast self examination among women and university students in Saudi Arabia <sup>[15, 18, 17, 19]</sup>.

Also this is consistent with the study done by Oluwole, Al-Dubai et al and Yakout et al. <sup>[20, 33, 34]</sup> who demonstrated that most of the respondents were aware about BSE. While, knowledge about the different methods of screening of breast cancer was generally poor. On the other hand, the study done among young Malaysian women revealed that electronic media such as radio and TV was the most common source of information of BSE.

The findings of the present study revealed that, most of participants were not performing clinical breast exam, because of no pain or swelling followed by lack of knowledge about CBS (73.3%, 50%, 12.3%, respectively). but, 26.7% answered that they perform CBE by doctors, 21% one time, 18%, for follow up and present pain/lump, (20.7%, 17% respectively). Also, most of participants don't have mammogram (80.3%), 19.7% have done mammogram, one time, for fear from breast cancer, diagnosis and follow-up (16.7%, 18.7%, 13.3% and 12%, respectively) and good awareness about importance of mammogram for detecting breast cancer. Statistical significance difference between employees, house wife, students regarding importance of mammogram for detecting breast cancer, employees more aware than other groups. Also significance difference regarding clinical breast exam. Most of participants had not done CBE, no statistical difference regarding performing mammogram. Radi <sup>[19]</sup>, highlighted that, lack of understanding of the importance of breast self-examination, may be due to underutilization of mammogram screening. Also the knowledge of the use of mammogram as a screening tool for early detection of breast cancer was found to be poor among study participants, only 14.3% have heard about screening mammogram. Participants showed poor understanding of major breast cancer risk

factors, Alharbi et al. <sup>[35]</sup>, and Baig et al <sup>[21]</sup>, reported that, Early detection of breast cancer can be achieved by performing breast self examination (BSE), clinical breast examination (CBE) and mammogram. The utilization of other breast cancer screening services can serve as a veritable means of obtaining information concerning screening methods such as mammogram. The fact that women with poor access to physician care are less likely to undergo mammogram has been reported by Schueler et al. <sup>[36]</sup>. Clinicians need to be educated on the need to give information to women on the most current investigative or screening methods as these patients may never get such opportunities in other settings apart from hospitals. The possibility of improving mammogram screening among hospital inpatients has also been described <sup>[38]</sup>.

Regarding mammogram awareness, this study found that half of the respondents had heard about mammogram. This figure is high in comparison to that reported in Saudi Arabia (30.0%) by Sait et al. <sup>[38]</sup> and Iran (9.0%) by Montazeri et al. <sup>[39]</sup> but is lower than that in Turkey (72.1%) <sup>[40]</sup>. Mammogram, breast self examination and clinical breast examination are considered as screening methods for early detection of breast cancer. Lam et al., <sup>[41]</sup> and screening behavior was found to be influenced by level of knowledge and perceived risk factor among women <sup>[42]</sup>. In addition, inadequate knowledge on breast cancer and screening methods might be one of the main reasons for the delay of breast cancer detection in Malaysia <sup>[43]</sup>.

**In conclusion**, this study found good awareness and knowledge regarding risk factors and symptoms of breast cancer among women in Taif City. This study found a low awareness of mammogram and clinical breast examination. Since only few women in this study had done mammogram and breast clinical exam, there is a need to introduce breast cancer education on risk factors, early signs, and methods of diagnosis of breast cancer for secondary schools as well as universities. The earlier detection through screening, the increased awareness and improved treatment, are believed to have decreased the breast cancer mortality rate.

## 6. Recommendation

Further research studies should be undertaken on the Taif City for women to deal with an early detection of breast cancer.

Promote awareness of the women about screening procedure through breast companion and social media is the vital role for breast cancer detection and prevention.

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