Hebron University Research Journal-A (Natural Sciences) - (مجلة جامعة الخليل للبحوث- أ (العلوم الطبيعيه)

Volume 9 | Issue 1 Article 3

2020

Knowledge, beliefs and attitudes of female university students in Palestine toward breast cancer and breast self-examination

Alaa Khraiwesh
Hebron University, alaamik@hebron.edu

mohammad Dweib
Hebron University, mohammadd@hebron.edu

Areej Shakarna
Hebron university, AreejShakarna@hebron.edu

Shireen Solimia
Hebron University, ShireeSolimia@hebron.edu

Hebron University Research Journal(A)
Vol.(9), pp.(29-44), 2020

H.U.R.J. is available online at
http://www.hebron.edu/journal

Knowledge, beliefs and attitudes of female university students in Palestine toward breast cancer and breast self-examination

*Mohammad Dweib, Alaa Khraiwesh, Areej Shakarna, Shireen Solimia
Department of Pharmacy, College of Pharmacy and Medical Sciences, Hebron University, Palestine
Corresponding author: mohammadd@hebron.edu

Received: (14/11/2019), Accepted: (17/8/2020)

Abstract:

Breast cancer**,** being the most prevalent cancer among women worldwide, leads to about 400,000 deaths yearly. All women should have a basic understanding of breast self-examination (BSE). This study aims at determining university students' knowledge, behavior and beliefs about breast cancer and BSE. Data were obtained using a structured questionnaire that was distributed over 1200 female university students in 6 Palestinian universities. The questionnaire evaluated the students' knowledge, behavior, and attitudes about breast cancer and BSE. The study revealed that 86% of the participants had an awareness of breast cancer and 33% were aware of the term BSE. Only 45% of the participants had ever performed BSE. The study also revealed some misconceptions related to breast cancer; about half of the participants believed that breast cancer certainly leads to death and 24% of them believed that a person can have breast cancer only if they had a family history. Further efforts need to be done to expand women's knowledge about breast cancer, early detection and treatment.

Keywords: cancer, breast, BSE, knowledge, students

الملخص:

يؤدي سرطان الثدي إلى وفاة حوالي أربعمئة ألف حالة سنويًا، كونه أكثر أنواع السرطان انتشارًا بين النساء في جميع أنحاء العالم، وعليه فيجب أن يكون لدى جميع النساء فهم أساسي للفحص الذاتي للثدي. **و**تهدف هذه الدراسة إلى تحديد معرفة طلاب الجامعات وسلوكهم ومعتقداتهم حول سرطان الثدي والفحص الذاتي له، حيث تمّ الحصول على البيانات باستخدام استبيان منظم تمّ توزيعه على (1200) طالبة جامعية في ستّ جامعات فلسطينية. قام الاستبيان بتقييم معرفة الطلاب وسلوكهم ومواقفهم حول سرطان الثدي والفحص الذاتي له، حيث كشفت الدراسة أن 86 ٪ من المشاركات لديهن الوعي بسرطان الثدي، و 33 ٪ كُنّ على علم بمصطلح الفحص الذاتي للثدي، و 45 ٪ فقط من المشاركات قد أجرين الفحص الذاتي للثدي في السابق. وكشفت الدراسة أيضًا عن بعض المفاهيم الخاطئة المتعلقة بسرطان الثدي منها اعتقاد حوالي نصف المشاركات أنّ سرطان الثدي يؤدي بالتأكيد إلى الوفاة. واعتقاد 24٪ منهنّ أن الشخص يمكن أن يصاب بسرطان الثدي إذا كان لديه تاريخ عائلي فقط .

التوصيات: يجب بذل مزيد من الجهود لتوسيع معرفة النساء بسرطان الثدي والكشف المبكّر عنه وعلاجه.

الكلمات المفتاحية: سرطان الثدي، تقييم معرفة الطلاب وسلوكهم

INTRODUCTION

Breast cancer is the most prevalent cancer among women in developed and developing countries (Serwanga, et al., 2015). It is estimated that over one million cases of breast cancer are diagnosed every year, and 4-5 hundred thousand women die from the disease each year, which accounts for about 14 percent of the total female cancer deaths. Approximately, 60 percent of breast cancer deaths are believed to occur in economically developing countries (Godfrey, et al., 2016).

A clear etiology of breast cancer has not been identified yet, but many factors are known to be responsible for increasing the likelihood of breast cancer. These factors can be classified as modifiable (obesity, hormones, alcohol consumption) and not modifiable (age, family history, early menarche) risk factors (American

Cancer Society. Breast Cancer Facts & Figures 2015-2016. Atlanta: American Cancer Society, Inc. 2015).

Due to its slow rate of growth, breast cancer can be treated successfully if diagnosed early. Early diagnosis leads to cure in early breast cancers and reduced risk of mortality and morbidity (Ilhan, et al., 2014). The rate of survival after five years can reach up to 85% if early detected, while it can be as low as 56% with late detection (Hallal, 1982).

Early detection of breast cancer depends on breast self-examination (BSE), mammography, and clinical breast examination (CBE). All women should have basic information about how, when, and what to look for while performing BSE (Al Otaibi, et al., 2017).

Although the importance of BSE is debated, the American Cancer Society still recommends it for early detection of breast cancer as it helps women in both becoming familiar with the appearance and the sense of their breasts and detecting any changes and reporting them to physicians (American Cancer Society, 2016).

The number of studies that were performed to assess knowledge about breast cancer and cancer detection in developing countries is small compared to those performed in developed countries. As to our knowledge, only one study was conducted in Palestine to assess the knowledge and attitudes of university students about BSE and included a limited number of subjects (Ayed, et al., 2015). The available data indicate that a very small number of women have adequate knowledge about cancer, its risk factors, preventive measures and detection methods. These studies also indicate that women have false beliefs related to the previous points which may negatively affect women perception towards the curability of cancer detected in early stages and the effectiveness of screening measures. So, it is essential to assess the level and quality of knowledge held by women in developing countries (Suleiman, 2014).

This study aimed at determining university students' knowledge, behavior and beliefs about breast cancer and breast self-examination.

METHODS

This cross sectional study was performed between March and July 2017 and included six Palestinian universities (Hebron University, Palestine Polytechnic University, Al-Quds Open University, Bethlehem University, Al-Quds University and Palestine Ahliya University). Four of these universities offer medical or health related programs. Female students who were available at the university campuses during the period of data collection were recruited to fill the study questionnaire. Male students and university employees were excluded from the study. An equal number of questionnaires were distributed among the six universities with a total of 1200 questionnaires (200 questionnaires from each university). The students were randomly chosen to fill the questionnaires when they were outside their class time as they were standing in a location easily reachable for the researchers, such as the university square or cafeteria.

The participants were invited to fill the paper questionnaire by a formal cover letter that explained the purpose of the study and assured the participants that all the information given will remain confidential and anonymous. The students were given simple instructions of how to fill the questionnaire and were given an adequate time for filling it. The questionnaires were then numbered and entered in Statistical Package for the Social Sciences (SPSS), Version 19 (IBM, Corp., Chicago, Illinois, USA).

The questionnaire that was used was pre-validated and pilot-tested. It was adapted from previous studies discussing the same subject (Ahmed, 2010, Akhtari-Zavare, et al., 2013, Al-Naggar, et al., 2011, Al-Sharbatti, et al., 2014, Godfrey, et al., 2016, Hadi, et al., 2010, Ilhan, et al., 2014, Nde, et al., 2015). The questionnaire was translated to Arabic, modified slightly to be applicable in

Palestine, and translated back to English to assure that the translation to Arabic did not affect its structure. A pilot study was performed on thirty female students from the same target population to test the clarity of questions, effectiveness of instructions, comprehensiveness of response sets, time needed to fill the questionnaire and success of data collection method.

Pilot subjects were asked to comment on the applicability and validity of the questionnaire. All questions were answered without any need for clarification. The researchers estimated that it would take ten minutes to fill the questionnaire, and data from the pilot were excluded from the final analysis.

The questionnaire included four main parts: 1) demographic data; 2) knowledge about breast cancer and BSE; 3) attitudes towards breast cancer and risk factors; 4) practice of breast cancer screening and BSE.

Scoring system: Each question had a group of answer points, one point was awarded for each correct answer; incorrect or "I don't know" answer were given a zero. Correct answers were summed up to get a total score for each participant.

Validity and reliability of the study: The questionnaire was reviewed and validated by a group of 4 experts in health research; they slightly modified and accepted the questionnaire. Internal consistency among the questionnaire items was calculated to be 0.85 Cronbach's alpha (α) and it was considered acceptable for the study.

Response rate: The response rate was around 99% as only 15 students refused to fill the questionnaire in the selected population and were replaced by other students from the same university.

RESULTS

A total of 1200 students completed the questionnaire. Participants were mostly between 18 and 22 years of age (70%), Muslims (68%) and single (76%). The

study group was aged from 18 to 37 years with a median age of 20 and a mean of 21±3.3 years. Table 1 reveals the demographic characteristics of the female students who participated.

Table 1: Demographic characteristics of participating female university students

Demographic characteristics	**Frequency (n)**	**Percentage**
Age in years		
<18	32	2.5
18-22	840	70
23-27	144	12
28-32	133	11
33-37	51	4.5
Total	1200	100
Religion		
Islam	815	68
Christianity	385	32
Other	0	0
Total	1200	100
Marital status		
Single	911	76
Married	262	22
Divorced	27	2
Total	1200	100

Of the 1200 participants, 1032 (86%) had any awareness of the term breast cancer. About half of these participants had obtained their knowledge from their friends and families or from health workers (figure 1).

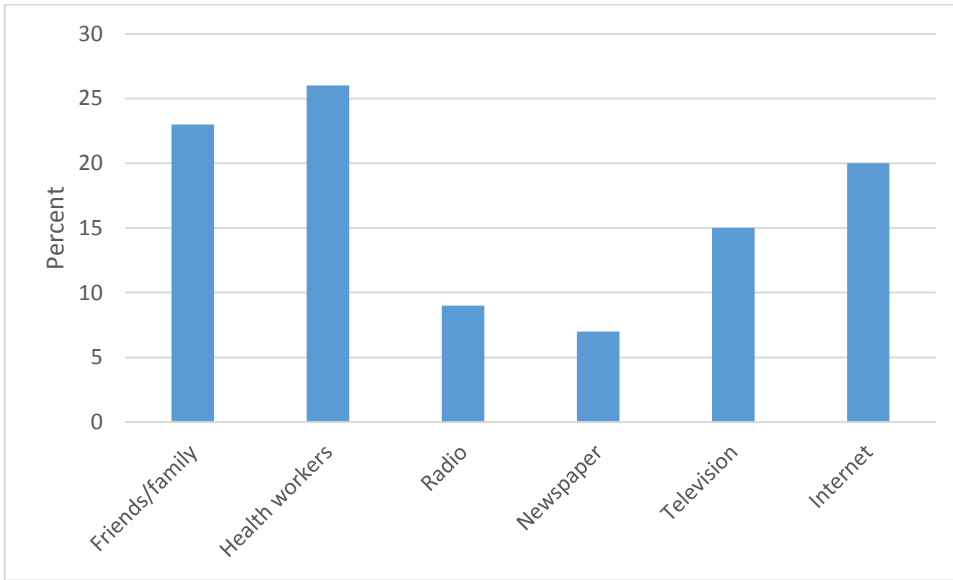

Figure 1: Source of breast cancer information among participating female university students

Of the 1032 participants who were aware of the term breast cancer, 278 (27%) stated that they considered the cause of breast cancer to be a medical condition. Other perceived reasons and risk factors for breast cancer are shown in table 2.

Table 2: Perceived risk factors for breast cancer among participating female university students

Response	Frequency (n)	Percentage
Use of brassieres	78	7.5
Spiritual	56	5.5
No breast feeding	112	11
Old age	131	12.5
Old age marriage	49	4.5
Old age first pregnancy	82	8
Inherited/familial	160	15.5
Never being married	33	3
Medical condition	278	27
Excessive breastfeeding	23	2.5
Diet	21	2
Other	9	1
Total	1032	100

None of the students who participated in the study reported presently having breast cancer, although a family history of breast cancer was reported by 42 students (3.5%), most frequently in second degree relatives (n = 26, 61.9%).

Most of the participants who were aware of breast cancer disagreed that patients with breast cancer should be isolated from the community (n=830, 81%) and 620 (60%) thought that breast cancer is not a punishment from God. Most of those participants also agreed that breast cancer should receive support from the community (98%). Other beliefs are shown in table 3.

Table 3: Assessment of attitudes towards breast cancer among female students who were aware of breast cancer

Response	**Agree**		**Disagree**	
	Frequency (n)	**Percentage**	**Frequency (n)**	**Percentage**
Breast cancer patients should be isolated	202	20	830	80
Breast cancer patients should be allowed to live freely in the community	972	94	60	6
Breast cancer is a punishment from God	412	40	620	60
Breast cancer patients should be provided with support and home care by the community	1011	98	21	2
Breast cancer patients should not be allowed to breast feed	817	79	215	21
Women should be afraid of breast cancer	618	60	414	40

Figure 2 shows the percentage of right answers concerning methods used for early detection of breast cancer. Less than half of the participants who are aware of breast cancer had ever heard of BSE (n=340, 33%) or clinical breast examination (29%). Only 109 (10.5%) of them correctly identified mammography as a method that can be used for early detection of breast cancer.

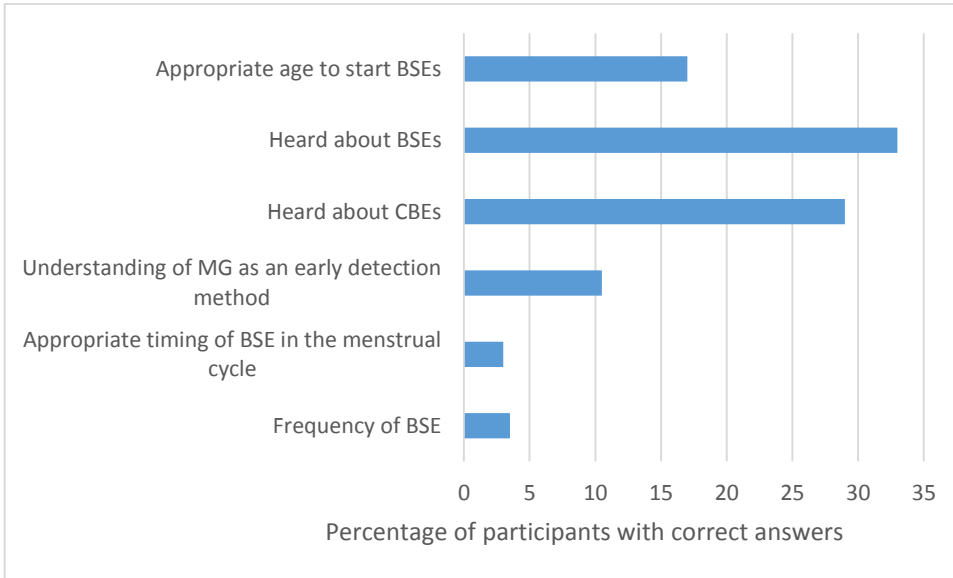

Figure 2: The percentage of correct answers among participants regarding methods for the early detection of breast cancer.

CBE = clinical breast examination; BSE = breast self-examination; MG = mammography.

Of those who are aware of BSE, only 153 (45%) had ever performed BSE themselves. Thirty-two percent of those had performed BSE as a part of routine medical examination and 37 (24%) performed it on the advice of a health care worker (Table 4). Out of the respondents who were aware of breast cancer, 383 (37%) would perform BSE if the results would be of benefit and 291 (28%) if their families agreed. A very high percentage of the participants did not have any knowledge concerning the recommended frequency of BSE (96.5%) or when to perform it in relation to the menstrual cycle (97%).

Table 4: Reasons for performing BSE, reasons for not performing BSE and conditions that warrant going for breast cancer screening

Reasons for performing BSE	**Frequency (n)**	**Percentage**
Advice from a health worker	37	24
Medical reason	28	18.5
Noticed a breast lump	11	7
One of my family members had cancer	28	18.5
Routine medical examination	49	32
Total	153	100
Reasons for not performing BSE	**Number**	**Percentage**
Not convenient	34	18
Too expensive	12	6
Not necessary	56	30
Too busy	70	37
Others	17	9
Total	187	100
Condition that warrants going for breast cancer screening	**Frequency (n)**	**Percentage**
If my family agrees	291	28
If the result will be of benefit	383	37
If there is a known cure for breast cancer	173	17
If it is free	107	10
Others	78	8
Total	1032	100

The most frequently reported misconceptions regarding breast cancer, BSE and related topics were that: treatment for breast cancer affects a woman's appearance and femininity (59.5%); herbal drugs can completely cure breast cancer (61%); breast cancer cannot be prevented by any means (41%); breast cancer certainly leads to death (52%); men cannot get breast cancer (41%); and women can only get breast cancer if they have a family history of breast cancer (24%).

DISCUSSION

Until now, there has been no known cure for late cases of breast cancer, so the main target of breast cancer education plans in developing countries is to endorse the value of early detection (Suleiman, 2014). Educating young people about breast cancer is not an easy task but it leads to better health outcomes in next generations (Gursoy, et al., 2009) because it is sure that low knowledge about cancer leads to delayed cancer detection and treatment and so worse outcomes (Nystrom, 2000).

The incidence of breast cancer in Palestine has increased in the last few years. The number of newly detected cases was 424 in 2015 (33.1 cases per 100 thousands of the population) (PMOH, 2016).

Due to the fact that this study involved an educated category of the population, it was predicted that they would have greater awareness and cognition of breast cancer than the general population. Nevertheless, the findings were unsatisfactory but somewhat higher than those observed in other countries. A study performed by Al-Dubai found that 81.8% of Malaysian university students were aware of breast cancer (Al-Dubai, et al., 2012) while only 51.8% of Jordanian university students ever heard of breast cancer (Suleiman, 2014).

This study shows the importance of family in two main aspects. The first is that a relatively high percentage of the participants obtained their information about breast cancer from the families and friends and the second is that also a relatively high percentage of the participants would undergo breast cancer detection examinations only if their families agreed. Similar sources of information were found in Jordan (Suleiman, 2014) and Egypt (Boulos and Ghali, 2013) were students obtained their information regarding breast cancer mainly from family and friends. This is slightly different from other areas such as Yemen and Turkey where most of the participants identified media such as TV as their main source of information (Ahmed, 2010, Karayurt, et al., 2008).

Regarding the most important beliefs that were observed through the study, most of the participants disagreed with the thought that breast cancer patients should be isolated from the community (80%) and most of the participants stated that patients with breast cancer should be supported by their communities (98%). These observations can be explained by the strong family bonds and the religious beliefs of the participants that motivate people to support others who have diseases (Suleiman, 2014).

Misconceptions, especially regarding the curability of breast cancer, can highly affect women attitudes towards seeking to detect or screen for breast cancer (Rauscher, et al., 2010). Many misconceptions regarding breast cancer were observed in this study; more than half of the participants (52%) thought that breast cancer certainly leads to death. This is very similar to that observed in the United Arab Emirates where 44% of the study population believed that breast cancer surely results in death (Al-Sharbatti, et al., 2014). Such thoughts have been proven to affect women's knowledge and practices for screening for breast cancer since they will think that little can be done to prevent death as a result of breast cancer (Luquis and Villanueva Cruz, 2006).

This study shows that participating students had a very poor knowledge of the methods used for early detection of breast cancer. Mammography was identified by only 10.5 percent of the participants who were aware of breast cancer and BSE was identified by only 33% (n= 340) of them. Out of the 340 participants who were aware of BSE only 153 (45%) had ever performed it. This is a little lower than that observed in Jordan where 34.9 % of those aware of breast cancer knew of BSE and 61.1% of them had performed it (Suleiman, 2014). It was also less than the percentage observed in the United Arab Emirates where 53.8% of the study population heard of BSE and 42.3% of them performed it (Al-Sharbatti, et al., 2014). Results from Egypt and Yemen were also higher (Ahmed, 2010, Boulos and Ghali, 2013). This may be may be due to inadequacy of teaching programs organized in Palestine to increase breast health awareness.

CONCLUSION

Most cases of breast cancer in Palestinian women are only discovered at late stages when the benefit of therapy is minimal. The results of this study are very similar to the previous studies which showed that women in developing countries had inadequate knowledge about many aspects related to breast cancer and BSE. Knowledge about breast cancer, its treatment and BSE was inadequate and most available knowledge was inaccurate. The results indicate the need to improve breast cancer awareness and to correct wrong information and beliefs related to breast cancer and BSE.

REFERENCES

Ahmed BA. (2010). Awareness and practice of breast cancer and breast-self examination among university students in Yemen. *Asian Pac J Cancer Prev,11*:101-5.

Akhtari-Zavare M, Juni MH, Said SM and Ismail IZ. (2013). Beliefs and behavior of Malaysia undergraduate female students in a public university toward breast self-examination practice. *Asian Pac J Cancer Prev, 14*:57-61.

Al-Dubai SA, Ganasegeran K, Alabsi AM, Abdul Manaf MR, Ijaz S and Kassim S. (2012). Exploration of barriers to breast-self examination among urban women in Shah Alam, Malaysia: a cross sectional study. *Asian Pac J Cancer Prev, 13*:1627-32.

Al-Naggar RA, Al-Naggar DH, Bobryshev YV, Chen R and Assabri A. (2011). Practice and barriers toward breast self-examination among young Malaysian women. *Asian Pac J Cancer Prev,* 12:1173-8.

Al-Sharbatti SS, Shaikh RB, Mathew E and Al-Biate MA. (2014).Assessment of Breast Cancer Awareness among Female University Students in Ajman, United Arab Emirates. *Sultan Qaboos Univ Med J,; 14*:e522-9.

Al Otaibi S, Al Harbi M, Al Kahmoas A, Al Qhatani F, Al Mutairi F, Al Mutairi T, Al Ajmi R and Al Mousawi F. (2017). General Breast Cancer Awareness among Women in Riyadh City. *Asian Pac J Cancer Prev*, 18:159-163.

Ayed A, Eqtait F, Harazneh L and Fashafsheh I. (2015). Breast Self-Examination in Terms of Knowledge, Attitude, and Practice among Nursing Students of Arab American University/ Jenin.; 6:37-47.

Boulos DN and Ghali RR. (2013). Awareness of breast cancer among female students at Ain Shams University, Egypt. *Glob J Health Sci, 6*:154-61.

Godfrey K, Agatha T and Nankumbi J. B. (2016). Breast Cancer Knowledge and Breast Self-Examination Practices Among Female University Students in Kampala, Uganda: A Descriptive Study. *Oman Med J, 31*:129-34.

Gursoy AA, Yigitbas C, Yilmaz F, Erdol H, Bulut HK, Mumcu HK, Calik KY, Kahriman I, Hintistan S and Nural N. (2009). The effects of peer education on university students' knowledge of breast self-examination and health beliefs. *J Cancer Educ, 24*:331-3.

Hadi MA, Hassali MA, Shafie AA and Awaisu A. (2010). Evaluation of breast cancer awareness among female university students in Malaysia. P*harm Pract (Granada), 8*:29-34.

Hallal JC. (1982). The relationship of health beliefs, health locus of control, and self concept to the practice of breast self-examination in adult women. *Nurs Res, 31*:137-42.

Ilhan N, Col AG, Tanboga E, Sengul A and Batmaz M. (2013). Behavior of College Students in Health Related Departments Towards Early Diagnosis of Breast Cancer. *J Breast Health, 10*:147-153.

Karayurt O, Ozmen D and Cetinkaya AC. (2008). Awareness of breast cancer risk factors and practice of breast self examination among high school students in Turkey. *BMC Public Health, 8*:359.

Luquis RR and Villanueva Cruz IJ. (2006). Knowledge, attitudes, and perceptions about breast cancer and breast cancer screening among Hispanic women residing in South Central Pennsylvania. *J Community Health, 31*:25-42.

Nde FP, Assob JC, Kwenti TE, Njunda AL and Tainenbe TR. (2015). Knowledge, attitude and practice of breast self-examination among female undergraduate students in the University of Buea. *BMC Res Notes*, 8:43.

Nystrom L. (2000). How effective is screening for breast cancer? *BMJ*, 321:647-8.

PMOH. Health Status Palestine (2015-2016). Palestinian Ministry of Health.

Rauscher GH, Ferrans CE, Kaiser K, Campbell RT, Calhoun EE and Warnecke RB. (2010). Misconceptions about breast lumps and delayed medical presentation in urban breast cancer patients. *Cancer Epidemiol Biomarkers Prev*, 19:640-7.

Serwanga J, Nakiboneka R, Mugaba S, Magambo B, Ndembi N, Gotch F and Kaleebu P. (2015). Frequencies of Gag-restricted T-cell escape "footprints" differ across HIV-1 clades A1 and D chronically infected Ugandans irrespective of host HLA B alleles. *Vaccine*, *33*:1664-72.

Suleiman AK. (2014). Awareness and attitudes regarding breast cancer and breast self-examination among female Jordanian students. *J Basic Clin Pharm, 5*:74-8.