

**Assessment of Female University Students  
knowledge and practicing Breast Self-  
Examination at Al Azhar University, Gaza  
Strip.**

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## **Abstract**

Breast cancer is the most commonly diagnosed cancer among females in developed and non- developed countries. Early detection of breast cancer improves the survival rate and decrease morbidity and mortality. This study aimed to assess female university students' knowledge and practice about Breast Self-Examination (BSE) at Al Azhar University, Gaza Strip. The study was designed as a cross- sectional study and involved students in the third and fourth levels of the Faculty of Applied Medical Sciences. The study involved the distribution of an interviewed questionnaire containing questions about knowledge and practice BSE in the period of 17<sup>th</sup> of October 2019 to 30<sup>th</sup> of October 2019. One hundred and ninety-students participated in the assessment. The participated students study at the Faculty of Applied Medical Sciences; 34% at the nutrition department, 41.8% at the medical laboratory department, 6.2% at the medical imaging department, and 18% at the nursing department. The majority of the students have heard about BSE (90.7%). Students know about BSE from multiple sources; university students (58.2%), social media (43.8%), health professionals (24.7). Despite the students' awareness about BSE, few of them practicing it regularly in that only 33.5% had ever practiced it in their life. The students recognized some barriers that hinder their regular practicing. The most determined barriers by the participants are do not have breast problem and does not know how to do that. A training program about BSE among university students is highly recommended in order to empower them for regular and correct practicing.

### ملخص اللغة العربية

سرطان الثدي هو أكثر أنواع السرطان شيوعاً بين الإناث في البلدان المتقدمة وغير المتقدمة. يعمل الاكتشاف المبكر لسرطان الثدي على تحسين معدل البقاء على قيد الحياة وتقليل معدلات المراضة والوفيات. هدفت هذه الدراسة إلى تقييم معرفة وممارسة الطالبات الجامعيات حول الفحص الذاتي للثدي في جامعة الأزهر بقطاع غزة. تم تصميم الدراسة كدراسة مستعرضة تضم الطالبات في المستويين الثالث والرابع من كلية العلوم الطبية التطبيقية. تضمنت الدراسة توزيع استبيان مقابلات يحتوي على أسئلة حول المعرفة وممارسة الفحص الذاتي للثدي في الفترة من سبعة عشر من أكتوبر 2019 إلى ثلاثين من أكتوبر 2019. وشارك في التقييم مائة وأربعة وتسعون طالبة. تدرس الطالبات المشاركات في كلية العلوم الطبية التطبيقية. 34% يقسم التغذية و 41.8% يقسم المختبرات الطبية و 6.2% يقسم التصوير الطبي و 18% يقسم التمريض. لقد سمعت غالبية الطلاب عن الفحص الذاتي للثدي (90.7%). عرفت الطالبات عن الفحص الذاتي للثدي من مصادر متعددة؛ الدراسات الجامعية (58.2%)، وسائل التواصل الاجتماعي (43.8%)، وأخصائي صحي (24.7%). على الرغم من وعي الطالبات بالفحص الذاتي للثدي، إلا أن القليل منهم يمارسونه بانتظام حيث لم يمارسه سوى 33.5% في حياتهم. أدرك الطلاب بعض العوائق التي تعوق ممارستهم المنتظمة. العوائق الأكثر شيوعاً لدى الطالبات المشاركات هي أنهم ليست لديهم مشكلة في الثدي ولا يعرفون كيف يفعلون ذلك. توصى الدراسة بضرورة إجراء برنامج تدريبي حول الفحص الذاتي للثدي بين طالبات الجامعات لتمكينهم من ممارسته بطريقة منتظمة وصحيحة.

الكلمات المفتاحية: سرطان الثدي، الفحص الذاتي للثدي، برنامج تدريبي، استبيان،

.SPSS

## **Introduction**

Breast cancer is the most common cancer among females in both developing and developed countries (Ibrahim et al., 2014; Baburin et al., 2016; Enayatrad et al., 2016; Kulhánová et al., 2017). It is becoming an urgent health problem in low and middle-income countries, where the historically low incidence rate increased by approximately 5 % per year (Bray et al., 2013). Breast cancer among Arab women have different characteristics than those reported in European and American women in that the affected patients are a decade younger, a more advanced stage of disease at first presentation, and larger tumor size (Chouchane et al., 2013). A doctorate thesis conducted at Arab Emirates country found that the most affected age group with breast cancer was (41-50) years old (Elobaid, 2014). Besides that, Alghamdi et al. (2013) showed the highest percentages (38.6% and 31.2%) of breast cancer cases among Saudi Arabian women lie within the age groups (30–44) and (45–59) years respectively. In comparison, the result is inconsistent with the most affected age groups among American women (50-59), and (60-69) years old (ACS, 2017). This difference reflects the occurrence of breast cancer among women in developing countries at earlier ages if compared to developed ones.

Previously, it was reported that the most affected age groups with breast cancer in the Gaza Strip were (45 – 54) years, (55 – 64) years constituting 23%, and 24.6% of all breast cancers respectively (MOH, 2015). In the same report, women under the age of 44 years have a rate of 22%. Besides Abo Al- Shiekh et al., (2019) found that women under the age of 40 years constitute 15.6% of the diagnosed breast cancer cases.

Palestinian women with breast cancer present in advanced stages of the disease. Around 42.2% of reported cases had regional lymph-node involvement stage III and 17.8% had distant metastases stage IV (Husseini et al., 2009).

Women of all ages must understand the importance of detecting and treating breast cancer early. Benefits of early detection include increased survival, increased treatment options and improved quality of life. For women, increasing age is one of the strongest risk factors for breast cancer with about 75% of cases diagnosed among women aged 50 years and more (Australian Institute of Health, 2012). However, in younger women, tumors are likely to be larger and more aggressive and the overall survival is lower than that of older women with the disease (Assi et al., 2013).

BSE is the examination by women themselves to help detect any abnormality within their breasts early. It involves visually and hand work to check the breasts for lumps, changes in the skin and nipples of the breasts (Ginsberg et al., 2012). ACS recommends starting BSE during high school years in monthly basis (ACS, 2018) as it is a very serious part of every adult woman's personal health regimen. Unlike other methods, BSE is costless, comparatively easy, painless, non-invasive, self-care action, and performed secretly. It allows women to take charge of their own health and teaches them about their bodies (Salama et al., 2013). This study aimed at assessing the knowledge and practice of BSE among paramedical university students at Al- Azhar in the Gaza Strip, Palestine.

## **Method and materials**

### **Study design**

This study is designed as descriptive cross- sectional design

### **Study setting**

The study was conducted at the Faculty of Applied medical sciences, Al- Azhar university, Gaza- Palestine

### **Study period**

The study was started in March, 2019 and finished by June, 2020.

### **Data collection methods**

A questionnaire was designed for data collection. The questionnaire consisted of three main parts; the first part dealing with sociodemographic characteristics, the second part concerned the knowledge about BSE, and the last section contains questions about practicing BSE.

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### **Data analysis**

Statistical package for social science (SPSS) program was used to analyze the data. The first stage of data entry was through constructing the entry base and coding of variables, followed by actual data entry. Descriptive analysis including figures, frequency tables were demonstrated.

### **Ethical Consideration**

Permissions from Helsinki committee and the dean of faculty of AMS through official letters and verbal acceptance were obtained, all participants have been informed about the study aim, its benefits and their acceptance and agreement were obtained, Every participant was provided with a full explanatory form attached to the questionnaire including the purpose of the study, assurance about the confidentiality of the information, a statement indicating that participation is voluntary and the researcher Acknowledged works of other authors using an APA referencing system.

### **Acknowledgment**

This paper is a part of a doctorate thesis presented for the University of Albutana, Sudan. The study entitled "The effect of a design Training Program on Female Students' Knowledge and Practice Regarding Breast Self-Examination in Al-Azhar University in Gaza Strip, Palestine, 2019"

### **Results**

**Table 1: Baseline characteristics of the study participants (N= 194)**

<b>Variable</b>	<b>N (%)</b>
Nutrition	66 (34)
Medical laboratory	81 (41.8)
Medical imaging	12 (6.2)
Nursing	35 (18)
<b>Residency area</b>	
North Gaza	30 (15.5)
Gaza	91 (46.9)

Variable	N (%)
Middle zone	32 (16.5)
Khan Younis	28 (14.4)
Rafah	13 (6.7)
<b>Marital status</b>	
Single	169 (87.1)
married	25 (12.9)
<b>Working status</b>	
Yes	6 (3.1)
No	188 (96.9)
<b>level of mothers' education</b>	
Preparatory and less	23 (11.8)
Secondary education (10-12 classes)	88 (45.4)
University education	83 (42.8)
<b>Level of fathers' education</b>	
Preparatory and less	25 (12.8)
Secondary education (10-12 classes)	74 (38.2)
University education	95 (49)

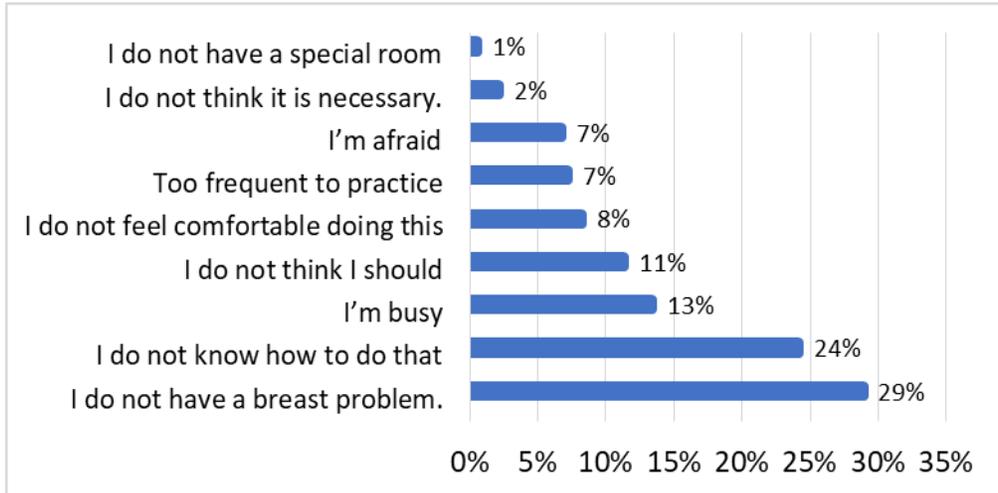
One hundred, ninety-four students participated in the assessment. Mean age 20.54 (Range: 18- 30) years. Table (1) shows the baseline assessment of the study participants. The participated students learn at the faculty of applied medical sciences; 34% at the nutrition department, 41.8% at the medical laboratory department, 6.2% at the medical imaging department, and 18% at the nursing department. About half are resident at the Gaza city (46.9%). The majority of the students are single (87.1%), and not working (96.9%). Regarding their parents' education, the majority of their mothers have either secondary (45.4%) or university (42.8%) education, and the majority of their fathers have either secondary (38.2%) or university (49%) education.

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**Table 2: Distribution of study participants about their knowledge about BSE**

<b>Variable</b>	<b>N (%)</b>
<b>Have you ever heard about BSE?</b>	
<b>Yes</b>	176 (90.7)
<b>No</b>	18 (9.3)
<b>Sources of information about BSE</b>	
University studies	113 (58.2)
Social media	85 (43.8)
Health professionals	48 (24.7)
Mass media	34 (17.5)
Family	23 (11.9)
Friends	14 (7.2)
Internet	3 (1.5)
workshop	1 (0.5)
<b>At what age should a girl begin BSE?</b>	
At the age 20 years	159 (82)
21- 30 years	27 (13.9)
31- 40 years	6 (3.1)
More than 40 years	2 (1)

Table (2) shows the distribution of the participants regarding their knowledge about BSE. The majority of the students have heard about it (90.7%). The students recognized some barriers that hinder their regular practicing. Students know about BSE from multiple sources; university students (58.2%), social media (43.8%), health professionals (24.7). Other determined sources are mass media, family, friends, internet, and workshop. Also, 82% of them know that females should practice BSE at 20 years old.



**Figure 1: Some recognized barriers to conduct BSE**

The most important barriers determined by the students are; do not have breast problem (29%), do not know how to do that (24%), being busy (13%), and do not think she needs it (11%).

**Table 3: Distribution of study participants about their Practicing BSE**

Do you practice BSE?	N (%)
Yes	65 (33.5)
No	129 (66.5)
How often do you practice BSE?	
Once a month and regularly	34 (50)
Once two months- five months and regularly	8 (11.8)
At any time and not regularly	26 (38.2)
What is the best time to do BSE?	
After starting the menstrual period	27 (13.9)
After the end of the menstrual period	127 (65.5)
At any time	7 (3.6)
I don't know	33 (17)

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Table (3) demonstrates information about the participants practicing BSE, only 33.5% of the students conduct BSE at least one in their time. Of them only 50% practice it regularly. More than two thirds (65.5%) of the students know the exact time to conduct it (after the end of the menstrual period).

### **Discussion**

Today, women in Palestine, especially Gaza Strip live with a lot of challenges, especially fighting against malignant Diseases. Breast cancer is the most common cancer among women and it is started to take a new epidemiological pattern by the effect of the youngest group of women. This challenge increases, and the key to safe life is to detect the disease in its early stages. The best way to do that is to conduct a regular BSE by the female herself. The current study conducted to assess knowledge and practice of female university students regarding BSE at AL- Azhar university, Gaza, Palestine.

### **Baseline characteristics of the participants**

The participated students are approximately of the same age, nearly half of them are resident at the Gaza city, this reflects the high population density at Gaza city as reported by PCBS (PCBS, 2017) and is attributed to the location of Al- Azhar university in this city. The majority of them are not married, this is an advantage that early marriage is not a common practice in the Gaza Strip. Also, the low percentage of married students is attributed to our culture and tradition in which few families let their girls get married during their university studies. The result is in line with a previous related study (Abdul-Lateef and Shabaan, 2019).

### **Knowledge about BSE**

The main result of this study reflects how much female nursing students are aware about BSE. The majority of the students heard about BSE. The major sources of information are university studies, and social media. Inconsistent with this finding, previous studies found that mass media is the major source of information about BSE (Moustafa et al., 2015; Abdul-Lateef and Shabaan, 2019).

## **Practicing BSE**

The majority of the participants recognize that BSE should be done at the age of 20 years and two-thirds know the exact time to do BSE. However, only a third of them tried to conduct BSE in their life and only half of the third are practice regularly. In a study in Gaza 61.9% percent of female school teachers performed BSE whereas, only 25.4% of teachers performed BSE as recommended (Abu-Shammala and Abed, 2015).

The major barriers recognized by the students are do not have breast problem and do not know how to do that. The result is consistent with other related studies (Birhane et al., 2017; Abdul-Lateef and Shabaan, 2019). This result empowers us to teach students in order to improve the feeling of responsibility on their breast and push them to be aware with how their breast look and feel through monthly BSE despite the absence of the disease

## **Conclusion and recommendations**

In conclusion, students at the Faculty of Applied Medical Sciences at AL-Azhar university, Gaza, Palestine are aware of BSE, however, their practicing is low. A training program about BSE among university students is highly recommended to empower them for regular and correct practicing.

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