

## Breast Self-Exam's Practice and Compliance Related Barriers among Staff Members in Faculty of Nursing at Menoufia University.

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**Abstract:** Breast self-exam (BSE) is a valuable technique for early detection of any abnormalities in the breast especially benign mass or even cancer. However, despite the relative merits of BSE, its use remains low. After detecting the significant noncompliance rate, many researchers have tried to determine the barriers that affect women's practice of BSE, which are essential to plan an effective intervention programs to improve BSE practice rate. **Purpose of this study** was to detect breast self-exam practice and compliance related barriers among staff members in Faculty of Nursing at Menoufia University. **Design:** a cross sectional study. **Setting:** This study conducted in Faculty of Nursing at Menoufia University. **Sample:** All convenient sample of 109 staff members from the faculty of nursing, Menoufia University. **Tools:** Self-administered questionnaire consisted of three parts was used to collect recommended data. **Results:** 43.11% of staff member weren't practice BSE at all while 56.8% of them were practice. Almost all staff haven't sufficient time or suitable place to practice (97.75% and 95% respectively), more than three quarters of staff fear to already find a mass or feel not confident to detect a mass (78.4%) and more than half of staff can't differentiate mass from natural breast tissue or younger to practice such procedure (52.27% and 56.82% respectively). **Conclusion:** 56.8% of staff member were practiced the BSE while 43.11% of them weren't practice at all. The most common barrier hinder staff members to practice or comply with BSE were haven't suitable place or sufficient time for practice, be younger to practice such procedure, pregnant / lactating, can't differentiate mass from natural breast tissue, feel not confident to detect a masses, had large breast size, haven't positive family history, didn't want to think about breast cancer and fear to already find a mass. **Recommendations:** Mandatory system in Egypt should be implemented by authorized personnel for all females to monthly practice the BSE procedure and comply with it.

**Keywords:** Breast self-exam Practice, Practice and compliance related barriers & Staff members.

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### Operational definition

**Breast Self-Exam:** -Regular palpatory examination procedure of both breasts after menstruation ended to detect lumps or other changes that may need further evaluation as part of breast cancer screening.

**Compliance:** The extent to which every member practice BSE monthly.

**Barriers:** -Any obstacle hinder the female to practice the BSE monthly.

### I. Introduction

Breast cancer is the most common type of cancer causing the highest rate of cancer related deaths among women worldwide. It is a global health problem of both developing and developed countries (WHO, 2013). Worldwide, it is estimated that more than one million women are diagnosed with breast cancer every year, and more than 410,000 will die from the disease. In low- and middle-income countries (LMCs) (Coughlin and Ekwueme, 2009).

In Egypt, breast cancer accounts for 35.1% of the cases of cancer and is the most prevalent cancer among Egyptian women; the median age at diagnosis for breast cancer is ten years younger than in the United States and Europe (El-Mohsenet al., 2015). Breast cancer typically asymptomatic when the tumor is small, later it has grown, it could be represented by one or more signs as painless breast or under armpit lump, breast pain, swelling or thickness of the breast's skin. Spontaneous discharge of the nipple particularly if bloody and erosion or inversion in the nipple (American Cancer Society, 2013).

Breast self-exam (BSE) is one of screening methods beside the clinical breast examination and mammography. All these methods should usually done in combination for proper ensured diagnosis (Despina et al., 2017). Although mammography is the most effective method, it more expensive to be commonly used except in countries with good health infrastructure (American Cancer Society and WHO, 2013). Although BSE alone is not sufficient for early detection of breast cancer, but it is still an important screening tool for early

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detection of breast cancer in developing countries, because it is cheap, widely available, and does not require complex technical training (Giridhara et al., 2011). Overall, by performing regular BSE, women familiar with the structure of normal breasts will be motivated to attend screening clinics for mammography and clinical breast examination (Giridhara et al., 2011; Tavafian et al., 2009).

On the other hand, many investigators have tried to determine the factors that affect female's practice and compliance with BSE practice, because these factors are essential to plan effective intervention programs to improve BSE practice (Othman et al., 2015). Current literature showed many barriers to BSE practice, which include social and cultural clues of breast cancer and BSE, socio-demographic factors, level of knowledge and awareness (Rasu et al., 2011). So this study aiming to detect the breast self-exam practice and compliance related barriers among staff members in Faculty of Nursing at Menoufia University.

### **Significance of the study**

More than 90% of breast cancer cases can be detected as early by women themselves by stressing the importance of BSE as the key breast cancer detection mechanism. The problem is that poor awareness of breast cancer symptoms has usually been associated with patient delay in seeking help resulting in reduced survival. Although all staff members actually knowing these facts, we observe that, most of them didn't comply with the exam. So researchers decide to identify the barriers to fight it with hope to find a mandatory system in Egypt by authorized personnel for all females to monthly practice the BSE procedure and to comply with it (El-Mohsen & El-Maksoud, 2015).

Compliance with BSE practice has been an ongoing issue and area of concern in nursing and medicine over the past 50 years. Poor compliance is a serious public health issue that continues to have a lasting impact upon individual's outcomes and the cost of medical care. On the other hand, determining the factors that affect female's practice of BSE to be prevented, are essential to plan effective intervention programs to improve BSE practice (Najib, 2013).

### **Purpose of the Study**

The purpose of the current study was to detect breast self-exam practice and compliance related barriers among staff members in Faculty of Nursing at Menoufia University.

### **Research questions:**

1. To what extent the staff members in the faculty of Nursing at Menoufia University practice BSE?
2. To what extent the staff members in the faculty of Nursing at Menoufia University comply with the BSE practice?
3. What are the most apparent barriers to practice or comply with the BSE among staff members in the faculty of Nursing at Menoufia University?

## **II. Subjects and Method**

### **Subjects**

**Design:** Cross sectional study.

**Setting:** Faculty of Nursing - Menoufia University.

**Subjects:** All convenient sample of staff members (109) was included in the study according to the following

### **Inclusion criteria:**

-Female.

- History of attending any educational program about BSE.

-Accept to participate in the study.

**Tool of data collection:** One tool consisted of three parts used to collect the necessary data.

**Tool I: Self-administered questionnaire:** It was developed by the researchers after intensive reviewing of recent relevant literature as (Bao et al., 2017, Kwok et al., 2015 & Najib, 2013), it included three main parts:

**Part one: Bio-demographic and menstrual characteristics of studied participants:** to assess all staff members' personal, medical, menstrual data. It including three sections:

**Section I: Personal data of studied participants:** Contain three questions about age, residence and scientific degree.

**Section II: Medical data of studied participants:** Including question regarding history of chronic illness, family history of breast cancer, personal history of breast disease and hormonal drug usage.

**Section III: Menstrual history of studied participants:** Consists of questions related to age of menarche, duration of menstruation, amount of menstrual blood, dysmenorrhea and menstrual interval.

**Part two: BSE practice & its compliance rhythm.** Including two sections:

**Section I: BSE practice:** Contain a closed-end question entitled do you practice with BSE monthly?

**Scoring system:** Each member was given a score of two if answer yes even for one practice all over a year and a score of one if answer never practice or intended not practice at all.

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**Section II: BSE compliance rhythm:** After intensive reviewing of the recent relevant literatures as (Bao et al., 2017, Kwok et al., 2015 & Najib, 2013), the researcher divided the rhythm to:

- **Regular compliance:** If the member done the practice 9-12 times per year.
- **To some extent compliance:** If the member done the practice 5-8 times per year.
- **Irregular compliance:** If the member done the practice 1-4 times per year.

**Scoring system:** Each member was given a score of three if regularly comply with the practice, a score of two if comply to some extent and a score of one with irregular compliance as discussed above.

**Part three: BSE practice and compliance related barriers:** include an open end question about any barrier hindering BSE practice or compliance. Data was collected in this part from staff members who intended never practice BSE, irregularly comply with the practice and practice BSE to some extent.

### Methodology

- 1- A written official letter was obtained from the Dean of the Faculty of Nursing, Menoufia University.
- 2- An extensive review related to the study area was done including electronic dissertations, available books and articles as (Bao et al., 2017, Kwok et al., 2015 & Najib, 2013 ). A review of literature to formulate knowledge base and data collection tool relevant to the research area also was done.

### Tool validity and reliability:

For validity purposes the researchers conducted an extensive literature review and developed the questionnaire from the previously used tools and reviewing pertinent reviews. The tool was designed by the researchers and revised by five experts in the field of medical surgical and maternal and newborn health nursing in the Faculty of Nursing of Menoufia University (for content validity). The interview questionnaire underwent some modifications according to the panel judgment regarding the clarity of sentences and appropriateness of content. Test-retest reliability was used to estimate reliability of tool. Cronbach's Alpha coefficient test was used to ascertain relevance and consistency of the tools and measure its items. It was 0.89 with a relatively homogenous items.

### Pilot Study

Pilot was conducted on 11 participants to be sure about the validity of the tools, the feasibility of the study and to estimate the time needed for data collection. Each one was given an opportunity to freely refuse participation. They were free to ask any question about the study details. Based on the pilot study; the researchers rephrased some questions and sentences then set the final fieldwork schedule.

### Ethical considerations

After explanations prior to enrollment in the study. Each participant was informed that participation in the study was voluntary. Also participant could withdraw from the study whenever decides. Oral participant's consent to participate in the study was obtained from all participants after clear and proper explanation of the study purpose and its importance for them. Each participant was reassured that any obtained information would be confidential and used only for the study. The researcher emphasized that participation in the study was entirely voluntary and anonymity of the participant was assured through coding data.

### Data collection:

- a. Data were collected from beginning of January 2017 to end of March 2017.
- b. The researcher collect data from each participant 3 days weekly according to the presence and absenteeism of the staff member.
- c. The researchers initiated data collection by distributing questionnaire among participants in their offices. Assessment of personal, medical and menstrual data of each participant collected using section I, II & III in part one of the structured tool.
- d. Each participant member reported if she practice the BSE monthly or not using part two section I then reported the rhythm of the practice using part two section II.
- e. Only members whom never practice BSE/ intended not to practice, comply to some extent and irregularly comply with BSE practice reported all barriers hindering them to practice using part three of the structured tool.
- f. The questionnaire took about 30 minutes from each participant.
- g. All obtained data were analyzed to detect breast self-exam practice compliance and related barriers among staff members in Faculty of Nursing at Menoufia University.

## Data Analysis

From the research and its goals the data collected were tabulated and analyzed by SPSS (statistical package for the social science software) program by using: Frequencies and percentages for calculate demographics data.

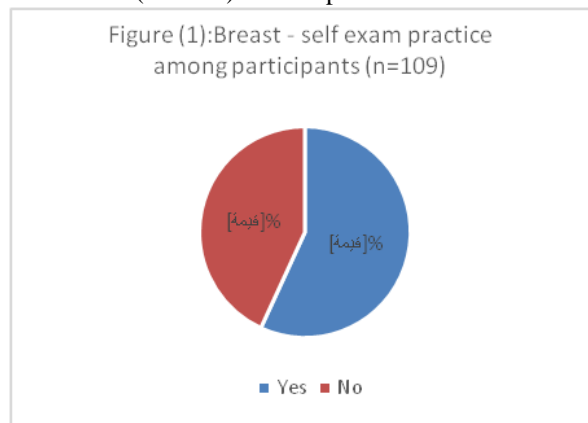
## III. Results

**Table 1** illustrates that, more than half (53.2%) of all participants were between 25 to 35 years of age, also more than three quarters of staff weren't have history of chronic disease or breast cancer (80.7% and 85.8% respectively). More than three quarters of all participants (79.8%) started the menarche before 14 years, more than two thirds (62.3%) of the staff have 3-5 days of menstruation. In addition, more than two thirds (64.2%) of the staff weren't have dysmenorrhea. Amount of menstrual blood were moderate among the majority (86.2%) of the staff.

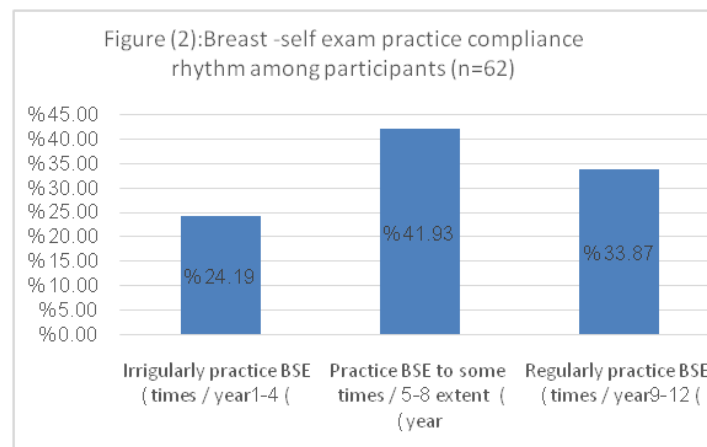
**Table 1:** Bio-demographic and menstrual characteristics of all participants (n=109).

Item	No	%
<b>Section I: Personal data of studied participants</b>		
<b>Age</b>		
• 25-35 year	58	53.2
• 36-45 year	32	29.3
• >45 year	19	17.4
<b>Residence</b>		
• Rural	77	70.6
• Urban	32	29.3
<b>Scientific degree</b>		
• Clinical instructor	15	13.7
• Master degree	44	40.3
• Doctoral degree	40	36.6
• Assistant professor	10	9.1
<b>Section II: Medical data of studied participants</b>		
<b>History of chronic disease</b>		
• Yes	21	19.3
• No	88	80.7
<b>Family history of breast cancer</b>		
• Yes	23	14.3
• No	86	85.8
<b>Personal history of breast disease</b>		
• Yes	10	9.1
• No	99	90.8
<b>Hormonal drug usage</b>		
• Yes	39	35.8
• No	70	64.2
<b>Section III: Menstrual history of studied participants.</b>		
<b>Age of menarche</b>		
• <14 year	87	79.8
• ≥14year	22	20.1
<b>Duration of menstruation</b>		
• 3-5 days	68	62.3
• >5 days	41	37.6
<b>Menstruation interval</b>		
• ≤28 day	94	86.2
• >28 day	15	13.7
<b>Amount of menstrual blood</b>		
• Moderate	94	86.2
• Severe	15	13.7
<b>Dysmenorrhea</b>		
• Yes	39	35.7
• No	70	64.2

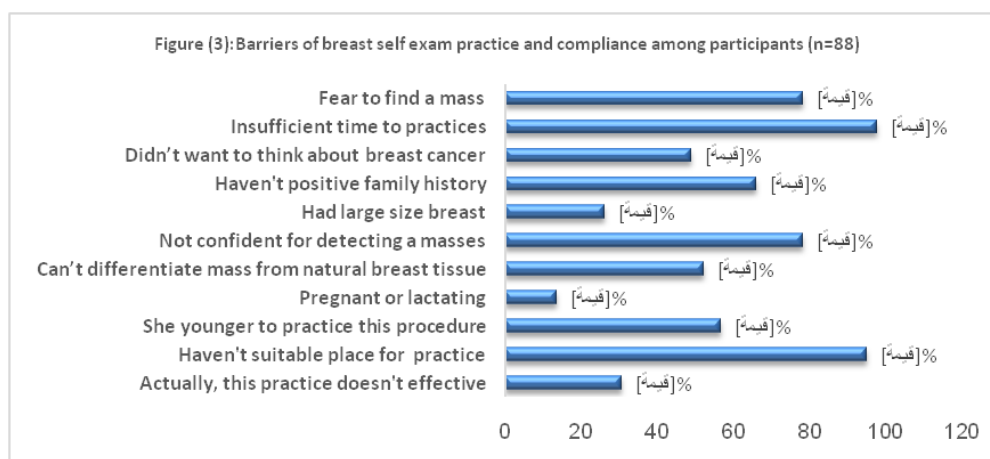
**Figure 1** shows that, among 109 members; 62 of them (56.8%) were practice the BSE while less than half of them (43.11%) weren't practice BSE at all.



**Figure 2** explains the BSE compliance rhythm among 62 members whom were practiced BSE. Slightly more than a third of them (33.87%) were regularly comply with the BSE practice (9-12 times per year), while less than half of them (41.93%) comply with the BSE practice to some extent (5-8 times per year) and nearly less than a quarter of them (24.19%) comply with the BSE practice irregularly (1-4 times per year).



**Figure 3** outline the barriers hindering BSE practice and compliance among 88 members whom didn't practice at all, practice to some extent and irregularly practice BSE (47+15+26 respectively). Almost all of them haven't sufficient time or suitable place to practice (97.75% and 95% respectively). More than three quarters of them fear to already find a mass or feel not confident to detect a mass (78.4%). More than half of them can't differentiate mass from natural breast tissue or younger to practice such procedure (52.27% and 56.82% respectively).



**Table2** demonstrates that, there was a significant relation between age and BSE practice  $P < 0.001$ , while there were no significant relation between BSE practice and personal and family history of breast diseases  $P > 0.05$ .

**Table (2):** Relation between breast self exam practice and age, personal and family history of breast diseases.

Items		Breast self – exam practice				X <sup>2</sup>	P. Value
		No (n = 47)		Yes (n=62)			
		No	%	No	%		
Age	• 25-35 year	47	100	43	69.4	17.44	0.001
	• 36-45 year	0	0	19	30.6		
Personal history of breast disease	• No	42	89.4	57	91.9	0.2	0.64
	• Yes	5	10.6	5	8.1		
Family history of breast cancer	• No	34	72.3	53	85.5	2.8	0.09
	• Yes	13	27.7	9	14.5		

#### IV. Discussion

It is anticipated that incidence rates of breast cancer in developing countries will continue to increase. Easy inexpensive BSE or other early detection methods and access to optimal treatment are the keys to reducing breast cancer-related mortality, but cultural and economic obstacles persist. Consequently, the challenge is to customise breast cancer control initiatives to the particular needs of each country to ensure the best possible outcomes (Danny et al., 2014).

This study was the first in Egypt to identify practice and compliance barriers to BSE among staff members of nursing faculty. The study evidenced that, Nursing staff were teaching and helping others than helping themselves. But on the other hand; they didn't apply what they teach.

#### Regarding bio-demographic and menstrual data of participants.

The current study findings revealed that, more than half of all participants were aged 25 to 35 years, also more than three quarters of staff weren't have history of chronic disease or cancer. This results were incongruence with the cross sectional study by Mehrnooshetal., 2015 who were studying barriers to breast self-examination practice among Malaysian female students and found that, the mean age of respondents was 21.7 year and ranged between 20 and 25 years old. Family history of breast cancer was 15% of the respondents while 11% had histories of breast problems. This result were also near to those done by Ilknur et al., 2008 whom studied the problems encountered by midwives during breast self-examination training. Also another study of Ilknur and Sebahat, 2009 who conduct a comparison of two different educational methods on teachers' knowledge, beliefs and behaviors regarding breast cancer screening was revealed that, the average age of the midwives was  $35.25 \pm 5.67$ , about 90.3% of the midwives stated that they had no breast cancer cases in their family history. About 86.4% of the midwives (n 89) stated that they had not experienced any problem relating to their breasts.

Ilknur, 2008 conclude that, as education levels of women increase, the rates of practice of early diagnosis methods such as BSE also increases. Low levels of education of women in this research (5 and 8 years of education in general) seem to negatively affect rates of BSE practice. Which was contradicted with the recent study as all members were highly educated.

#### In relation to BSE compliance rhythm.

From the aspect that regular practice of BSE influences early diagnosis, proper management, prognosis and survival rates in breast cancer the current study findings revealed that, although all the participants have practiced or trained or teach about breast cancer, less than half of staff member (43.11%) weren't practice BSE at all. The researchers point of view was consistent with Hacksaw and Paul 2003 who studied stated Breast self-examination and death from breast cancer and reported that, Although there is no evidence that BSE lowers mortality from breast cancer, it should not be promoted to effectively detect breast cancer tumors in women. Women are at risk of harm from BSE including unnecessary breast biopsies, imaging tests and emotional duress.

On the other hand more than half of staff member were comply with BSE practice. Slightly more than a third of staff were regularly comply with the breast self exam practice (9-12 times per year), while less than half (41.93%) of staff comply with the breast self exam practice to some extent (5-8 times per year) and less than a quarter (24.19%) of staff comply with the breast self exam practice irregularly (1-4 times per year). A same study was done by Mehrnooshetal., 2015 found 738 (99.5%) of all the participants have heard about breast cancer, only 189 (25.5%) performed BSE. Also in the same study among those who practice BSE, most of them practice BSE occasionally at 96 respondents (50.8%) and only 59 (31.2%) respondents practice BSE once a month. Practicing or comply with practice may be due to that, BSE requires a high level of motivation as checking their breast regularly, positive family history of breast cancer, personal histories of breast diseases.

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Another study entitled factors associated with breast self-examination practices and beliefs in female workers at a Muslim community by Ilknur, 2008 at Turkey found only 4.3% of the participants reported that they practice BSE on a regular (monthly) basis.

These findings answering the first and second research questions about the extent to which staff members were practicing and comply with the BSE.

### **Concerning barriers to practice or comply with BSE**

The present study findings outlined the barriers hinder staff member to practice or comply with the BSE as, almost all staff haven't sufficient time or suitable place to practice (97.75% and 95% respectively). More than three quarters of staff fear to already find a mass or feel not confident to detect a mass (78.4%). More than half of staff can't differentiate mass from natural breast tissue or younger to practice such procedure (52.27% and 56.82% respectively). On the same line a study by Lina, 2013 reported that, more than two thirds of participants have worries in detecting breast cancer at 340 respondents (61.5%). About 299 (54.1%) respondents said that "doing BSE will take too much time and 294 (53.2%) respondents do not have enough privacy to do BSE.

This may be in contrary to Mehrnooshetal., 2015 as 74.5% respondents who did not practice BSE had nominated barriers for not performing it. The most common causes for not performing BSE were; unknown technique at 390 respondents (70.5%); haven't even a symptoms to start practice at 358 respondents (64.7%) and worries to already detect cancer at 340 respondents (61.5%). About (54.1%) respondents said that procedure take too much time and (53.2%) respondents haven't enough privacy to do BSE.

Oppositely, a study done by Lina, 2013 studied the barriers to breast cancer-screening participation among Jordanian and Palestinian American women relating the causes to cultural beliefs and the social stigma of cancer, which limits the women and affected their participation in BSE.

Besides that, similar findings have been reported by Arevian et al., 2011; Doumit et al., 2007; Petro-Nustus and Mikhail, 2002 indicating that, the social stigma of cancer revolved around a misunderstanding of cancer, a fear that BSE practice would lead to getting the disease and bring shame to the family.

Another different barrier appear in a study revealed that, women put themselves last when it comes to their needs and health. Women acknowledged that taking care of their children, extended family members and household chores came first.

All these findings answering the last research question about the barriers hindering staff member to practice and comply with the BSE.

## **V. Conclusion**

The study findings succeeded in answering research questions as

- 43.11% of staff member weren't practice BSE at all while 56.8% of them were practice.
- The compliance rhythm among 56.8% whom were practicing the BSE was as the following:
  - ✓ 33.87% regularly comply with BSE practice (9-12 times /year).
  - ✓ 41.93% comply with BSE to some extent (5-8 times /year).
  - ✓ 24.19% irregularly comply with BSE practice (1-4 times / year).
- The most common barrier hinder staff members to practice and comply with BSE in the order were :
  - ✓ Haven't suitable place or sufficient time for practice.
  - ✓ Fear to already find a mass.
  - ✓ Be younger to practice such procedure.
  - ✓ Feel not confident to detect a mass.
  - ✓ Haven't positive family history.
  - ✓ Can't differentiate mass from natural breast tissue.
  - ✓ Didn't want to think about breast cancer at all.
  - ✓ Had large breast size.
  - ✓ Pregnant / lactating.

## **VI. Recommendations**

Based on the findings of the current study, the following recommendations can be suggested:

- Mandatory system in Egypt should be implemented by authorized personnel for all females to monthly practice the BSE procedure.
- Special attention should be paid to high-risk group; for example, all relatives of cancer patients should be examined by specialist while caring for their relatives in oncology hospitals.
- Periodic and continuous in-services training for all females in the community to be confident to practice and comply with BSE procedure.
- Best efforts should be directed toward elimination of barriers of breast self-exam practice / compliance.

- More emphasis needs to be placed on breast cancer prevention strategies and the development of population-based registration systems for the effective planning and monitoring of cancer control programs.

### Acknowledgements

The researchers would express their greatest thanks to all people whom facilitate the study conduction and completion.

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Hassnaa Eid Shaban Mosa. "Breast Self-Exam's Practice and Compliance Related Barriers among Staff Members in Faculty of Nursing at Menoufia University." *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, vol. 8, no.02 , 2019, pp. 30-37.