

Knowledge, Attitude and Practice of Omani Women on Breast Self-Examination in Oman: A Grounded Theory

Dr. Zalikha Khamis Darwish Al-Marzouqi¹, Nawal Said Al-Surihi¹

¹ Oman College of Health Sciences | Nursing College | Sultanate of Oman

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* Corresponding author:

z.yamani99@yahoo.com

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Abstract: Breast cancer is considered one of the most health-threatening among women, and it has been deemed the greatest deadly type of disease all over the world. Internationally, breast cancer is considered the top cause of morbidity and mortality among women. Breast cancer is number one in many countries and is the second leading cause of death among women in the world. However, breast cancer can be encountered through health education and proper practice of breast self-examination. Objective: The study aimed to explore knowledge, attitude and practice of breast self-examination among young Omani women and their mothers. Methods: This study used a qualitative design, guided by a grounded theory approach. The researchers communicated with young Omani women and their mothers to study their knowledge, attitude and practice of breast self-examination. Semi-structured interviews with 15 young Omani women (aged 16-18 years) and their mothers were conducted. This study was conducted in the North Batinah Governorate of Oman at three secondary girls' schools from February 2022 to October 2022. At the beginning of the data collection, purposive sampling was used, which relied on inclusion criteria. Then the theoretical sample was used up to the point of data saturation. Variation was considered when recruiting young women and their mothers such as various age groups, various residence places, various schools and various levels of education. Results: Two main categories emerged from the consistent analysis of the data: "Constructing knowledge and attitude" and "Practicing Breast Self-Examination". The data revealed that many young women and their mothers had some information on breast self-examination and its importance. They also had positive attitude towards breast self-examination. Many mothers were not practicing breast self-examination because they perceived breast self-examination was not important before the age of 40. Majority of women do not have skills to conduct breast self-examination. Conclusion: Knowing what young women and their mothers know about breast self-examination, their attitude towards this examination and the practice of breast self-examination would help in the development of a program about breast self-examination in Oman to educate the women about the appropriate age to perform breast self-examination and to develop women's skills in breast self-examination.

Keywords: Knowledge, Attitude, Practice, Breast, Self-examination.

معرفة ومواقف وممارسات المرأة العمانية في الفحص الذاتي للثدي في عمان: نظرية راسخة

الدكتورة / زليخة خميس درويش المرزوقي¹، نوال سعيد السريحي¹

¹ كلية عمان للعلوم الصحية | كلية التمريض | سلطنة عمان

المستخلص: يعتبر سرطان الثدي من أكثر الأمراض التي تهدد صحة النساء، وقد تم اعتباره أعظم أنواع الأمراض المميتة في جميع أنحاء العالم. على الصعيد الدولي، يعتبر سرطان الثدي السبب الرئيسي للمرضة والوفيات بين النساء. سرطان الثدي هو رقم واحد في العديد من البلدان وهو ثاني سبب رئيسي للوفاة بين النساء في العالم. ومع ذلك، يمكن مواجهة سرطان الثدي من خلال التثقيف الصحي والممارسة السليمة للفحص الذاتي للثدي. الهدف: هدفت هذه الدراسة إلى استكشاف معرفة واتجاهات وممارسة الفحص الذاتي للثدي بين الشابات العمانيات وأمتهن. الأساليب: استخدمت هذه الدراسة تصميمًا نوعيًا مسترشدًا بنهج نظرية الأرض. تواصل الباحثون مع الشابات العمانيات وأمتهن لدراسة معرفتهن وسلوكهن وممارستهن للفحص الذاتي للثدي. تم إجراء مقابلات شبه منظمة مع 15 شابة عمانية (تراوح أعمارهن بين 16 و18 عامًا) وأمتهن. أجريت هذه الدراسة في محافظة شمال الباطنة بسلطنة عمان في ثلاث مدارس ثانوية للبنات في الفترة من فبراير 2022 إلى أكتوبر 2022. في بداية جمع البيانات، تم استخدام العينات الهادفة، والتي اعتمدت على معايير الاشتغال. ثم تم استخدام العينة النظرية حتى نقطة تشبع البيانات. تم أخذ التباين في الاعتبار عند تجنيد الشابات وأمتهن مثل الفئات العمرية المختلفة وأماكن الإقامة المختلفة والمدارس المختلفة ومستويات التعليم المختلفة. النتائج: ظهرت فئتان رئيسيتان من التحليل المتسق للبيانات: "بناء المعرفة والمواقف" و "ممارسة الفحص الذاتي للثدي". وكشفت البيانات أن العديد من الشابات وأمتهن لديهن بعض المعلومات عن الفحص الذاتي للثدي وأهميته. لديهم أيضًا موقف إيجابي تجاه الفحص الذاتي للثدي. لم تكن الكثير من الأمهات يمارسن الفحص الذاتي للثدي لأنهن لاحظن أن الفحص الذاتي للثدي لم يكن مهمًا قبل سن الأربعين. ومعظم النساء لا يملكن المهارات لإجراء الفحص الذاتي للثدي. الاستنتاج: إن معرفة ما تعرفه الشابات وأمتهن عن الفحص الذاتي للثدي، وموقفهن من هذا الفحص وممارسة الفحص الذاتي للثدي من شأنه أن يساعد في تطوير برنامج حول الفحص الذاتي للثدي في عمان لتثقيف النساء حول الفحص الذاتي للثدي. السن المناسب لإجراء الفحص الذاتي للثدي ولتنمية مهارات المرأة في الفحص الذاتي للثدي. الكلمات المفتاحية: المعرفة، الموقف، الممارسة، الثدي، الفحص الذاتي.

Introduction

Breast cancer is considered one of the most health-threatening among women, and it is considered the top cause of morbidity and mortality among women [1, 2]. Breast cancer is the second leading cause of death among women in the world [3]. In the Middle East and specifically in Oman, it is observed that breast cancer rate is increasing [4]. According to the Ministry of Health (2020) in Oman, breast cancer is the second leading cause of death among Omani women, and it accounts for 32% of the total registered cases of cancer. Breast cancer is presented at a young age and with an advanced stage of breast cancer among young women [5, 6].

Breast cancer is a type of cancer usually faced by appropriate health education. Knowing its risk factors, signs and symptoms, the ways to detect breast abnormalities and obtaining early nursing and medical care; all improve the survival rates of women. Numerous studies showed that the increased mortality rate of breast cancer could be due to a lack of knowledge about breast cancer and its early detection and management [3, 7, 8]. Also, women's attitudes and practice of breast self-examination play an important role in discovering breast abnormalities before breast cancer spreads [3, 7]. A review of the literature showed that factors such as knowledge among women and healthcare providers, professionals' recommendations, socio-demographic factors, beliefs, religious, family and social support, availability of services and perceived usefulness of breast screening tests, all impact women's behaviour toward obtaining medical advice or treatments [9,10].

In Oman, the Ministry of Health provides many ways to detect breast cancer. These are providing treatments for women with breast abnormalities in breast clinics. The Ministry of Health also supplies all healthcare institutions with mobile mammography buses during Breast Cancer Awareness month to discover breast abnormalities among women. However, one of the easiest ways to identify breast abnormalities is by conducting a breast self-examination. This practice would help women to detect any abnormalities within the breast. However, its use among women stays low [11]. A study conducted in Yemen by Bawazir et al (2019) showed that women with good knowledge about breast cancer and breast cancer screening would discover breast abnormalities early [12]. In Oman, very few studies examined the perception of women regarding breast self-examination. Also, no research study examines knowledge, attitude and practice of breast self-examination among young women and their mothers. Therefore, this study is significant to understand young women and their mother's knowledge, attitude and practice regarding breast self-examination in Oman.

Research Problem

Up to the researchers' knowledge, no study in Oman examined knowledge, attitude and practice of breast self-examination among young women and their mothers. Few studies explored the perception of women with breast cancer about breast cancer and breast self-examination. Thus, this study is significant to understand what is going on in Oman regarding breast self-examination from the point of view of young women and their mothers. This study helps to understand Omani women's thinking about breast self-examination and if they are practicing breast self-examination. Understanding the knowledge, attitude and practice of young women and their mothers could help to pave the way for developing an appropriate educational program or service about breast self-examination for Omani women within schools and healthcare institutions.

Research Questions

- What do young women and their mothers know about breast self-examination?
- What is the attitude of young women and their mothers towards breast self-examination?
- What is the practice of young women and their mothers about breast self-examination?

Material and Methods

Study Design

This study used a qualitative design and a grounded theory method to explore knowledge, attitude and practice of breast self-examination among young women and their mothers. The researcher spoke with the participants to interpret their words regarding breast self-examination.

Setting of the Study

This study was performed in the North Batinah Governorate of Oman at three secondary girls' schools in Sohar and Saham Wilayats to reach young Omani women and their mothers to explore their knowledge, attitude and practice of breast self-examination. North Batinah Governorate was selected because it is the second governorate by population size. This study was conducted between Feb – Oct 2022.

Sample Size and Sampling Strategy

The inclusion criteria for the participants in this study includes:

- Young women studying at secondary schools.

- Mothers and their daughters living at North Batinah Governorate.
- The mothers of the young women. If the mothers were unable to participate in this study, the young women were excluded from the study.

For this study, 30 participants were interviewed (15 mothers and their daughters). 15 mothers were married and their age ranged between 40 to 55 years. 80% of mothers obtained secondary school certificates, and 20% had high-degree certificates. 73.30% of women were housewives, and 26.70% were working out of the house. Also 15 young women aged 16-18 years participated in this study, and they were studying in secondary schools.

Table 1: Sociodemographic Data of the Mothers

NO	Age	Marital Status	Occupational Status	Level of Education
1	40	Married	House wife	Secondary school certificate
2	47	Married	Teacher	Bachelor in Education
3	45	Married	House wife	Secondary school certificate
4	43	Married	House wife	Secondary school certificate
5	52	Married	House wife	Secondary school certificate
6	42	Married	Cashier	Secondary school certificate
7	48	Married	House wife	Secondary school certificate
8	55	Married	House wife	Secondary school certificate
9	43	Married	Teacher	Bachelor in Education
10	44	Married	House wife	Secondary school certificate
11	54	Married	House wife	Secondary school certificate
12	50	Married	House wife	Secondary school certificate
13	41	Married	Nurse	Diploma in nursing
14	49	Married	House wife	Secondary school certificate
15	53	Married	House wife	Secondary school certificate

Table 2: Sociodemographic Data of the Young Women (Daughters)

NO	Age	Marital Status	Occupational Status	Level of Education
1	16	Single	Student	Student at Secondary School
2	17	Single	Student	Student at Secondary School
3	16	Single	Student	Student at Secondary School
4	16	Single	Student	Student at Secondary School
5	18	Single	Student	Student at Secondary School
6	17	Single	Student	Student at Secondary School
7	17	Single	Student	Student at Secondary School
8	18	Single	Student	Student at Secondary School
9	16	Single	Student	Student at Secondary School
10	17	Single	Student	Student at Secondary School
11	16	Single	Student	Student at Secondary School
12	18	Single	Student	Student at Secondary School
13	18	Single	Student	Student at Secondary School
14	17	Single	Student	Student at Secondary School
15	16	Single	Student	Student at Secondary School

Purposive sampling based on inclusion criteria was used to recruit the participants for this study. These participants enquired about their knowledge, attitude and practice of breast self-examination. Variations were considered when recruiting young women and their mothers in this study. For example, various age groups, various residence places, various schools (study sites) and various levels of education.

Data Collection Methods and Tool

Grounded theory is deemed the most appropriate method to examine social relationships and actions when there are few research studies on the factors that affect people's experiences [13]. It also allows people's lives to be seen holistically and from their viewpoints [13]. It is a

methodology for describing social processes during people's interactions within the structure of a conceptualized theory through data collection and analysis [14, 15]. For this study, the researchers talked to young women and their mothers to interpret their points of view regarding their knowledge, attitude and practice of breast self-examination. The researchers also discussed with the participants the issue of practicing breast self-examination. This study would help to understand their knowledge, attitude and practice about breast self-examination in more detail.

Before starting the interviews, an initial interview topic guide was developed with a few questions related to breast self-examination. For example, what do you know about breast self-examination? Do you practice breast self-examination regularly? How do you practice breast self-examination? The topic guide was used to ensure that all the relevant questions were covered to meet the aim of the study (to explore knowledge, attitude and practice of breast self-examination which would help to understand participants' attitudes, views and beliefs on breast self-examination). Discussions with the participants allowed the researcher to explore their views on breast self-examination. After the first few interviews with young women and their mothers, it was clear that questions needed to be added to the topic guide to understand further issues that were emerging from the conversations and the guide was amended accordingly. The topic guide is in appendix 1: Topic Guild.

In this study, semi-structured interviews are considered an important method to collect data regarding the participant's knowledge, attitude and practice of breast self-examination. Initially, semi-structured interviews were conducted with 10 participants (5 young women and their mothers). The initial analysis of the data showed the need to recruit additional women for this study. The researchers intended to explore the knowledge, attitude and practice of breast self-examination among young women and their mothers. According to Charmaz (2014), flexibility within the interview is significant to explore new ideas about the phenomenon under study [13]. Using semi-structured interviews allowed the researchers to follow concerns related to the research question, explore and clarify comments made by the participants [17]. Therefore, semi-structured interviews allowed the researchers to ask questions, in the same way with great depth [17]. For this study, the researchers interviewed 30 Omani women to describe women's accounts related to breast self-examination to gain an in-depth understanding of their knowledge, attitude and practice.

Data Processing and Data Analysis

Interviews were anonymized, and a code was given to each participant. The researchers revised transcripts for accuracy. The researchers audio-recorded all interviews and transcribed all data. The researchers made sure to record every word of all participants, so the results developed from the data, not from a personal view. In addressing credibility, the researchers tried to establish a true picture of the phenomenon under study. To allow transferability, the researchers provided adequate details of the context of the fieldwork for the readers to decide whether the main environment is similar to another situation with which they are familiar and whether the results can justifiably be applied to the other setting. Finally, to achieve confirmability, the researchers took steps to determine that results develop from the data and not their predispositions. Therefore, the researchers is considered qualified of understanding the participants' knowledge, perception and practice of breast self-examination.

Constant comparative analysis was used to analyze data in this study. Data collection and analysis occur at the same time in the grounded theory. The researchers used theoretical sampling to feed their constant comparative analysis of the collected data. At first, the researchers used open coding to create categories from the collected information and within each category; the researchers establish several subcategories. Coding helped the researchers to shape an analytic structure. During initial coding, the goal of the researchers was to stay open to all possible theoretical directions indicated by the data. This step in coding encouraged the researchers to decide about defining the core categories. Line-by-line coding was done, the researchers read the data systematically and then the data was coded. The researchers gave a name to each line of the data. Furthermore, the researchers compared data to find similarities and differences. In this phase, the researchers also compared the data with each other to generate conceptual categories.

Focused coding is the second major step during analysis. Here, the researchers collected the data in a new way to pinpoint the most outstanding categories from earlier codes. Focused coding provides the researchers with a concentrated way of looking at data, and it aids the researchers to gain a deeper understanding of the realistic world.

Ethical Approval

The approval of the proposed study was obtained from the MOH Ethical Committee in the Sultanate of Oman. Before performing the study, the design and purpose of the study were discussed with the Nursing and Midwifery Department in the Directorate General of Health Services in the North Batinah Governorate. The reason was that the researchers wanted to get permission to use study allocation and to get all facilities to perform this study. Also, the purpose of the study was discussed with the director of the selected schools to hang the advertisement poster.

Results

The data from the interviews underwent constant comparative analysis and two main categories emerged from the data, which were "Constructing Knowledge and Attitude" and "Practicing Breast Self-Examination".

Constructing Knowledge and Attitude

This theme explored women’s understanding of breast self-examination and its importance. Also, it explored the perception of women of appropriate age to conduct breast self-examination. In addition, the theme explored women’s attitudes toward breast self-examination. The data showed that most of the knowledge was constructed from the previous generation. The constructed knowledge had affected women’s attitudes toward practicing breast self-examination.

The data revealed that some mothers in this study (40%) were aware of some information about breast self-examination and its importance. They explained the importance of performing breast self-examination to detect any abnormalities in the breast. However, the majority of the mothers (80%) stressed the point that the ideal age to start breast self-examination was 40 years and above. One of the women stated that

“Breast self-examination is important and all women should do this examination to detect any abnormalities in the breast.... I think Breast self-examination should be done when women reach 40 years of age or more... I learned from my mother that it is not important to do breast self-examination before the age of 40”(Mother 3)

A question was asked to mothers regarding the reason for conducting breast self-examination after age of 40. The majority of mothers (80%) in this study perceived that conducting breast self-examination was not necessary before women reach 40 years of age because they were thinking that breast cancer affects women after the age of 40. Also, they understood from their mothers that breast cancer would not affect women before the age of 40. One of the mothers said that

“There is no need to conduct breast self-examination before 40 years because breast cancer will develop after the age of 40, that’s what my mother told me when I was young...breast cancer usually occurs after the age of 40 years”(Mother 5)

“I don’t think it is necessary to perform this examination before 40 years because breast cancer affects women after the age of 40...cancer is not affect young women”(Mother 15)

The women (80%) also perceived that it was not necessary to conduct breast self-examination before the age of 40 if they did not have a family history of breast cancer. One of the women reported that conducting breast self-examination is a waste of time if the women did not have a family history of breast cancer.

“If women don’t have history of breast cancer, I think no need to conduct breast self-examination because they are wasting their time”(Mother 12)

The mothers (80%) stressed also that breast self-examination should be conducted when women have breast issues like breast lumps or cancer.

“Breast self-examination is important to detect any lump in the breasts or any abnormalities....usually if women had changes in their breast, they can do breast self-examination, I mean when the women had breast lump or cancer”(Mother 6)

Majority of the women (80%) did not know the start age of performing breast self-examination and they believed that they can perform the examination at any time. They did not know the timing of conducting breast self-examination. One of the women declared that

“I think women can conduct breast self-examination at any time...I think we can do breast self-examination any time when we need to do”(Mother 6)

Only three mothers (20%) were aware about the appropriate age and timing to conduct breast self-examination. One of the mothers said that

“Yes I know as a nurse that I have to do breast self-examination when women reach 20 years of age and I know that women need to do breast self-examination in a regular manner, once a month and immediately after menstruation”(Mother 13)

A question was asked mothers if they are aware of how to conduct breast self-examination. Majority of the mothers (80%) responded that they were not confident in how to conduct breast self-examination because no one taught them how to perform breast self-examination. One of the mothers stated that

“I do not know to do breast self-examination...no one taught me to do that...I don’t know...when I need I have to go to the doctor and she will do breast examination for me”(Mother 10)

Only three mothers (20%) were aware about the techniques and positions to conduct breast self-examination. One of the mothers said that

“Yes I know how to do breast self-examination, I read some information from book and from internet”(Mother 2)

Table 3: Knowledge of Mothers about Breast Self-Examination

Knowledge about Breast Self-Examination	Yes	No
BSE and its importance	40%	60%
Appropriate age to perform BSE	20%	80%
Performing BSE (practical aspects)	20%	80%
Know that BSE should be perform once a month (Timing)	20%	80%

Knowledge about Breast Self-Examination	Yes	No
Know the BSE should be done immediately after menstruation (Timing)	20%	80%
Positions of performing BSE	20%	80%

On the other hand, majority of young women (daughters) (87%) were more knowledgeable than mothers about breast self-examination and its significance. They also knew about the ideal time to start breast self-examination, which is 20 years. According to the young women, they got health education at their schools from the school nurse about the importance of breast self-examination and the appropriate age to start conducting breast self-examination. One of the young women said that

“I received health education from school nurse at my school and she explained the importance of breast self-examination to detect any abnormalities in the breast. She also explained when women should perform breast self-examination and she said that when women reach 20 years old they should do this examination, I know about breast self-examination and its importance” (Daughter 1)

Very few young women (13%) were having the same concept as their mothers as they do not have to conduct breast self-examination before they reach 40 years of age because they don't have a family history of breast cancer. One of the daughters stated that

“I think, it is not important to do breast self-examination if we do not have breast cancer, I think it is not important to do” (Daughter 5)

Another question was asked to the young women if they know how to perform breast self-examination. Majority of the young women (90%) replied that they do not know about the techniques to conduct breast self-examination because they obtained only theory sessions on breast cancer and breast self-examination at schools but not practical sessions.

“Yes, school nurse taught us about breast cancer and breast self-examination but not how to do breast self-examination...I did not practice I don't know how to do breast self-examination” (Daughter 6)

The data also revealed that many young women (77%) knew that breast self-examination should perform once per month (after menstruation) for women with regular menstruation. Few young women (30%) explained that breast self-examination is usually performed immediately after menstruation. One of the young women said that

“I know that breast self-examination should be conducted after menstruation every month because of hormones still down if I am not mistaken... this examination is conducted for the women who have regular menstruation” (Daughter 14)

The data also revealed that many young women (77%) know about the position of the body while performing breast self-examination. They reported that breast self-examination could be performed by standing in front of a mirror or laying down position. They also explained the way of observing and palpating the breast to identify any changes in the breast and axillary area. One of the women stated that

“I know about breast self-examination and its importance. I know that I need to do breast self-examination in standing position or laying position if I feel tired...I know also that I have to use my fingers to touch my breast to find any abnormality and to see my breast for any changes” (Daughter 10)

Table 4: Knowledge of Young Women about Breast Self-Examination

Knowledge about Breast Self-Examination	Yes	No
BSE and its importance	87%	13%
Appropriate age to perform BSE	87%	13%
Performing BSE (practical aspects)	10%	90%
Know that BSE should be perform once a month (Timing)	77%	23%
Know the BSE should be done immediately after menstruation (Timing)	30%	70%
Positions of performing BSE	77%	23%

All women (mothers and their daughters) (100%) had a positive attitude towards breast self-examination due to its importance.

“Yes it is important to do breast self-examination... it is important to conduct this examination because of its importance to detect any abnormalities in the breast” (Mother 8)

“Yes it is important to do breast self-examination to detect abnormalities in the breast before the need for further treatment” (Daughter 5)

Table 5: Attitude of Young Women about Breast Self-Examination

Attitude Toward BSE and Its Importance	Young Women (Daughters)	Mothers
Positive Attitude	100%	100%
Negative Attitude	0%	0%

In sum, the data revealed that age and marital status were significant for knowledge about breast self-examination. Less age and single women were more knowledgeable about breast self-examination than older and married women. Young women (daughters) were more knowledgeable about breast self-examination and its importance than their mothers. Also the young women were more knowledgeable about the

appropriate age to conduct breast self-examination, timing and positions of breast self-examination. The reason for this was that the young women constructed their information about breast self-examination from a well educational system. Whereas the majority of the mothers constructed information about breast self-examination from the older generation. Therefore, the mothers perceived that breast self-examination should be performed when the women reach 40 years of age or above because they perceived that breast cancer would affect women after the age of 40. They also perceived that conducting breast self-examination was wasting of time if the women did not have a history of breast cancer.

The data also revealed that mothers with high level of education were more knowledge about breast self-examination, appropriate age, timing, positions and the practical aspects of breast self-examination than the mothers who got only secondary school certificate.

The data showed that there was no significant relationship between employment and participants knowledge. For example, two teachers and a nurse had good knowledge about breast self-examination. Whereas, a mother who worked as a cashier did not has good knowledge about breast self-examination. The remaining mothers who were housewives has poor knowledge about breast self-examination. The data showed that there is no significant relationship between demographic data and participants attitude towards breast self-examination.

Table 6: Relationship between Sociodemographic Data and Knowledge

Variables	Knowledge of Breast Self-Examination				N= 30
	Good		Poor		
	No	%	No	%	
Age					
16-18	13	86%	2	14%	15
40-55	3	20%	12	80%	15
Marital Status					
Single	13	86%	2	14%	15
Married	3	20%	12	80%	15
Level of Education					
Students	13	86%	2	14%	15
Secondary	-	-	12	80%	12
Diploma	1	6.7%	-	-	1
Bachelor	2	13.3%	-	-	2
Employment Status					
Employee	3	10%	1	3.30%	4
Not employee			26	86.70%	26

Table 7: Relationship between Sociodemographic Data and Attitude

Variables	Attitude Towards Breast Self-Examination				N= 30
	Positive		Negative		
	No	%	No	%	
Age					
16-18	15	100%	0	0%	15
40-55	15	100%	0	0%	15
Marital Status					
Single	15	100%	0	0%	15
Married	15	100%	0	0%	15
Level of Education					
Students	15	100%	0	0%	15
Secondary	12	80%	0	0%	12
Diploma	1	6.70%	0	0%	1
Bachelor	2	13.30%	0	0%	2
Employment Status					
Employee	4	13.30%	0	0%	4
Not employee	26	86.70%	0	0%	26

Practicing Breast Self-Examination

This theme explored participants’ practice of breast self-examination and if they were regularly conducting breast self-examination. According to mothers, they learned from their mothers (Grandmothers) that breast self-examination is not necessary if the women do not reach 40 years. Thus, majority of the mothers (80%) did not practice breast self-examination for many reasons. According to the mothers, when they were young, they did not perform breast self-examination because they perceived that it was not necessary to conduct breast self-examination before the age of 40.

“I did not feel that it is important to do breast self-examination when I was younger than 40 because I understood from my mother that breast cancer does not affect women before the age of 40 years”(Mother 14)

“It is wasting of time to do breast self-examination before the age of 40 because breast cancer will affect women after 40 years only”(Mother 10)

Other women were not practicing breast self-examination because they did not have a family history of breast cancer. As a result, they did not feel that it was required to conduct breast self-examination.

“I do not have family history of breast cancer so, no need to conduct breast self-examination”(Mother 12)

The data also revealed that women did not regularly perform breast self-examination because they were busy with their work. The mothers were busy with their work in and out of the house. The young women were busy with their studying.

“I am busy with my kids, home and other works at home and I forgot to do breast self-examination, yes, and I knew that I have to do every month but I forgot”(Mother 3)

“I am busy with my work and cannot remember to do breast self-examination on a regular basis”(Mother 4)

The busy life of the mothers led to forgetting to conduct breast self-examination at an appropriate time.

“My life is too busy and I don’t remember to conduct breast self-examination every month...it is difficult to remember” (Mother 11)

“I am busy with my house and family and I forgot to perform breast self-examination in a regular way” (Mother 4)

The majority of mothers (80%) did not trust their ability to do breast self-examination. As a result, they did not perform breast self-examination. According to them, they did not know the practical aspects of conducting breast self-examination thus, they did not perform this examination.

“I feel I do not have the skill to do breast self-examination...I do not know how to do breast self-examination so I don’t examine myself”(Mother 8)

All young women (100%) did not trust their ability to do breast self-examination. As a result, they did not perform breast self-examination. According to them, they did not know the practical aspects of conducting breast self-examination thus, they did not perform this examination.

“I did not do breast self-examination because I don’t know how to do it” (Daughter 4)

Table 8: Mothers’ and Young Women (Daughters) Practice of Breast Self-Examination

Practicing Breast Self-Examination	Mothers		Young Women	
	Yes	No	Yes	No
Performing breast self-examination in a regular way	20%	80%	0%	100%
Trust their ability to perform BSE	20%	80%	0%	100%

In sum, the data showed that there was no significant relationship between age, marital and employment status and practice of breast self-examination among the participants. However, there was a significant relationship between the level of women education and practice of breast self-examination.

Table 9: Relationship between Sociodemographic Data and Practice

Variables	Practice of Breast Self-Examination				N= 30
	Yes		No		
	No	%	No	%	
Age					
16-18	0	0%	15	100%	15
40-55	3	20%	12	80%	15
Marital Status					
Single	0	0%	15	100%	15
Married	3	20%	12	80%	15

Variables	Practice of Breast Self-Examination				N= 30
	Yes		No		
	No	%	No	%	
Level of Education					
Students	0	0%	15	100%	15
Secondary	0	0%	12	80%	12
Diploma	1	6.70%	0	0%	1
Bachelor	2	13.30%	0	0%	2
Employment Status					
Employee	3	10%	1	3.30%	4
Not employee	0	0%	26	86.70%	26

Discussion

This qualitative study explored the perspectives of young women and their mothers regarding breast self-examination. Many studies emphasized on the importance of breast self-examination because breast self-examination influences prognosis of breast diseases, treatment and survival rate [20, 21, 22]. However, the practice of breast self-examination is low among women. It is crucial that women understand how their breasts look and feel. Having knowledge and doing breast self-examination regularly is the best method to know about breast abnormalities. Any modifications from the normal look and feel can be an indication of breast disease. Thus, breast self-examination helped to detect breast diseases earlier.

In this study, the majority of women reported that they did not practice breast self-examination. This finding is consistent with many studies in Yemen [23], Egypt [24] and Nigeria [25] where the women in these studies did not practice breast self-examination for many reasons which includes lack of knowledge about the practical aspects of breast self-examination, forgetting and not interested to conduct breast self-examination. The findings in this study were consistent with other studies [22, 23, 26] in which the main reasons for not performing breast self-examination were: lack of knowledge, particularly the practical aspect of breast self-examination, engagement with work which resulted in forgetting to perform breast self-examination regularly. The new finding was women's belief that breast cancer would not affect women before the age of 40 which was not found in previous studies. Many women in this study believed that breast cancer would not affect women before the age of 40; thus, they did not perform breast self-examination. The effect of beliefs on breast self-examination of women is vital and has been analyzed with this aspect in many studies [27, 28, 29, 30]. A meta-synthesis using a thematic analysis method reported the wrong beliefs to have a great impact on women's practice of breast self-examination [31]. The possible reason is that women do not perceive performing breast self-examination as significant, so they do not perform breast examinations [32]. The women in this study did not feel fear if they did not perform breast self-examination because they believed that breast cancer would not affect women before the age of 40. This result contradicted a study conducted in Mexico on reasons for performing breast self-examination [32]. The finding of the study mentioned that fear of breast cancer was one of the reasons the women perform breast self-examination [32].

One of the reasons for not practicing breast self-examination was due to not receiving information from healthcare professionals and others within the community about breast self-examination. Women in this study had a lack of knowledge about the practical aspects of breast self-examination. This was consistent with many studies which showed that knowledge among women about breast self-examination is low due to lack of exposure to information about breast self-examination [20, 21, 23, 33]. A study conducted in Ethiopia showed that the rate of having good knowledge among female students about breast self-examination was found to be 49.9% and they did not practice breast self-examination because of not knowing the techniques of breast self-examination [34]. These results indicate that breast self-examination is a less-known practice among women, not only in Oman but internationally, and needs the broad participation of women to improve this practice. Likewise, lack of health awareness, low living standards and less attention to breast self-examination importance might contribute to their misinterpretation of breast self-examination. Knowing how to perform breast self-examination is essential for the effectiveness of this examination. Women in this study did not trust their ability to perform breast self-examination because they did not know the practical side of it. The fact that women know how to perform breast self-examination helps with perception and self-efficacy. Abolfotouh et al., 2018, mentioned that among Saudi women, the causes for not performing breast self-examination were a lack of knowledge on how to examine their breasts or a lack of trust in their ability to perform breast self-examination. Thus it is essential to explain how breast self-examination will be done in healthcare institutions by showing the women appropriate practical material [32]. Knowing how to perform breast self-examination will raise the number of women who do this examination and increase women's confidence.

Women in this study did not perform breast self-examination and according to them, they were busy with their work or study. This result is consistent with a study conducted in Thailand, where the women reported that they forgot to perform breast self-examination regularly because

they were busy with their life and work [35]. Moreover, a study by Madubogwu *et al.*, 2017, reported that occupation had significant correlations with the practice of breast self-examination, and many women did not perform this examination because they were busy with their work and ignored breast self-examination [36]. The findings of the study [36] were contradicted with the result of this study as most of the women in this study were not employee but still they did practice breast self-examination.

Conclusion

The data from the interviews underwent constant comparative analysis, and two main categories emerged, which are "Constructing Knowledge and Attitude" and "Practicing Breast Self-Examination". The data revealed that many women and their daughters had some information about breast self-examination and its importance. However, the mothers perceived that breast self-examination should be performed when women reach 40 years because breast cancer would not affect women before the age of 40. The mothers also believed that performing breast self-examination was wasting time if they did not have a history of breast cancer. On the other side, the daughters perceived that breast self-examination should be performed when women reach 20 years because breast cancer could affect women at any age. All mothers and their daughters had positive attitudes toward breast self-examination and its significance. In addition, the majority of young women and their mothers did not practice breast self-examination for many reasons. These were busy with their work, forgot to conduct breast self-examination at the appropriate time (after menstruation), and did not trust their ability to perform breast self-examination because they did not know the practical aspects of breast self-examination. The findings of this study indicated that the Ministry of Health should develop a program about breast self-examination to focus on the appropriate time to conduct breast self-examination. Also, it is necessary to focus on the practical aspects of performing breast self-examination. Further study should be conducted about the perceptions and attitudes of healthcare professionals towards breast self-examination.

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Appendix 1: Topic Guild

What do you know about breast self-examination?

Do you practice breast self-examination regularly?

How do you practice breast self-examination?

Do you know how to perform breast self-examination? The techniques and positions.

Is it important to do breast self-examination?

Do you think that breast self-examination is good practice? Why Yes, why No?

What do you believe about breast self-examination?

What is the appropriate timing to conduct breast self-examination?

When exactly you perform breast self-examination?

From where you got information about breast self-examination?

What others like health care professionals, mothers, and teachers said about breast self-examination? Do you believed their information?

Why?