

## KNOWLEDGE, ATTITUDE, AND PREVALENCE OF USE OF HORMONE REPLACEMENT THERAPY AMONG WOMEN IN UNITED ARAB EMIRATES

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### ABSTRACT

**Objectives:** The purpose of this study is to investigate the knowledge and attitude of women living in the United Arab Emirates (UAE) about hormone replacement therapy (HRT) and their associated health benefits and risks.

**Methods:** A cross-sectional study was performed among 220 women aged 20-70 years old in the UAE mainly in Abu Dhabi and Sharjah. The survey included 21 items; socio-demographic profiles, medical and menstrual histories, and questions related to their knowledge, attitude toward HRT use, benefits, and risks.

**Results:** Among females participated in the study, (48%) were using a variety of HRT for managing menopausal symptoms. Health care professionals were chosen the most as their main source of information in both Abu Dhabi and Sharjah (68%, 39%,  $p < 0.0001$ ). 26% of women living in Abu Dhabi and 19% in Sharjah thought that HRT was a good solution for women with menopausal symptoms. The percentages of women who had a negative attitude toward HRT were almost equal in both cities (Abu Dhabi 10.78%, Sharjah 14.41%). However, the overall knowledge of the participants about HRT risks and benefits was average.

**Conclusion:** The study indicated that there was a positive attitude toward HRT use and good knowledge of its possible benefits and risks among the participants which could be because physicians were their major source of information.

**Keywords:** Hormone replacement therapy, Menopause, Prevalence knowledge and attitude, United Arab Emirates, Sharjah, Abu Dhabi.

### INTRODUCTION

#### Menopause

Menopause represents the end of the reproductive life for females. As woman ages a progressive decrease in estrogenic secretion starts, which leads eventually to the failure of the ovaries function. This leads to social changes that may impair quality of life [1]. Menopause usually takes place between the age 40 and 50 years [2-4]. According to United Nation world population projections, the life expectancy is rising globally. In the United Arab Emirates (UAE) as in others countries, life expectancy is increasing as well, according to Dubai statistics center, in 2005, the estimated number of women ages 50-59 was 14,000, these numbers sharply increased to 45,613 in 2014 [5]. Women in UAE are expected to spend one-third of their lifetime after menopause, which makes it one of the most critical issues that women face worldwide and is considered as a midlife event through which most women go at some point in their lives [6,7].

Due to the drop in hormones levels, women start to suffer from undesirable vasomotor symptoms such as hot flushes, night sweats, vaginal dryness, and urinary incontinence. Different studies had shown that reported symptoms vary according to the region. Eastern and Asian women usually reported less vasomotor symptoms than western women [7-9]. In Turkey, for example, muscle-joint and bone pain were the most common symptoms of menopause [10]. In UAE and Nigeria, hot flushes were more common [4,11]. In Saudi women, it was irregular menstruation [12]. In general, these symptoms are usually less reported in societies which consider menopause as a positive normal event rather than a negative one, as women in this age group did not view them as a medical problem and took them as part of the normal aging process [11,13,14]. In Eastern countries, women become more respected as they grow older and have more free time for themselves [12,13,15,16], hence their positive attitude toward menopause compared to western women [1]. Several studies

also showed that postmenopausal women have more positive attitude toward menopause compared to premenopausal [16,17].

#### Hormone replacement therapy (HRT)

HRT is considered the most effective treatment to relief vasomotor symptoms and vaginal symptoms associated with menopause [18,19], as well as improving the mood and sleep quality [20]. Depending on woman age and onset of menopause, such as women under 60, will also benefit from prevention of osteoporosis [21], coronary heart diseases, dementia [22,23], and diabetes [18].

On the other hand, HRT was associated with increased risk of stroke [18,24,25], increased risk for developing breast cancer, especially the combination of estrogen and progesterone when used for 5 years or more [3,18,19,26]. In addition, Deep vein thrombosis risk, which is also considered an absolute contraindication to the use of HRT [18,26].

#### Attitudes toward HRT

It might be difficult for women to decide whether to use HTR or not based on the conflicting risks and benefits. Several studies had shown that women's perception of menopause and knowledge about HRT can influence their tendency to use it [17,27,28].

The perception of HRT was fluctuating over years depending on new evidence from published studies [17]. In 2002, there was a major drop in the use of HRT due to the results of the women's health initiative (WHI) study which showed that HRT use was associated with increased risk of ovarian cancer, breast cancer, and cardiovascular disease [29]. These results were also reported by heart and estrogen/progestin replacement study in 1998 [30]. As a result, the number of prescription decreased [31,32]. In 2005, a post hoc analysis of WHI study was conducted by the American menopause society and several other boards concluded that advanced age of women was associated with the increased side effects [33]. Later on, as more studies and evidence were published,

HRT went back to be the most effective treatment in the management of menopause symptoms and prevention of osteoporosis [14,33].

In eastern countries, the percentage of women receiving HRT is lower than Western women; this could be due to: First of all, Eastern women experience less frequent symptoms compared to western women [34]. Second, they have less awareness about the HRT risks and benefits [27]. According to the Asian menopause survey, among women who were using the HRT to relief symptoms, only 10% knew that it could be used to prevent osteoporosis [34]. Third reason is their preference to use natural alternatives rich in phytoestrogens soya and phytoestrogens such as soya beans, chick peas, red clover, and seeds, which are known to reduce hot flushes and other symptoms [35].

#### Aim

We decided to do this study to know the perception and awareness of HRT among women in UAE because only a few studies were conducted in the Middle East especially in UAE. Such study may reveal information that was not recognized by studies conducted in Western countries.

#### METHODS

##### Study design and sample

A cross-sectional study was performed among 220 women aged 20-70 years old. This study was carried out in the UAE mainly targeting two main cities: Abu Dhabi and Sharjah in 2015. This study was conducted on different age groups to determine the prevalence of the HRT use among menopausal and premenopausal women and the level of knowledge and awareness about HRT in general. Women who were less than 20 years old, refused to get engaged in the study and did not complete the survey, those who could not speak neither Arabic nor English was excluded from the study.

##### Sampling method

The survey was done in both Arabic and English versions, and they were distributed randomly in pharmacies, health centers, and the University of Sharjah. A total of 220 women participated - 102 from Abu Dhabi and 118 from Sharjah. Surveys were conducted by personal interview. The survey was prevalidated by giving it to 10 females and three faculty members before disseminating it.

##### Instruments

The questionnaire was constructed with 21 items, 12 closed multiple choice questions, 7 yes or no questions in addition to 2 essay questions. The beginning of the questionnaire was compromised of the socio-demographic profile of the participants where women were asked about their age group, nationality, location, marital status, and occupation. Then, they were asked if they have any family history of several medical conditions mentioned in a form of closed multiple choice questions. The following question was about their personal medical histories that included their previous and current diagnosed medical conditions and medications.

The next part consisted of yes or no questions related to their lifestyles and daily habits such as smoking, caffeine intake, and exercises. Menstrual history questions were asked to them afterward. They contained questions about their menstruation and whether they underwent hysterectomy or not. This was followed by 5 questions mainly about different menopausal symptoms, the use of HRT or contraceptives and if they experienced any side effects from the therapy. Then, they were questioned about the main sources of information about HRT and their attitudes toward it. The last question revealed the level of awareness about the benefits and risks of HRT among the participants.

##### Ethical consideration

The participation in the study was performed on a voluntary basis and moral manners, in which women who participated were told in an understandable language about the nature of the questions in the survey, the information needed to be gathered from them and the

collected data would be used only for scientific purposes. A consent paper was signed by the participants to assure their agreement to use their data and to ascertain their privacy and confidentiality.

#### Statistical analysis

The collected data from the 220 surveys were entered and analyzed using two programs, Excel program and the Statistical Package for the Social Sciences (SPSS) program. Excel program was used to convert some of the results into charts and tables while SPSS was employed to obtain the p values of the results and to compare between some percentages to determine if there is any statistically significant difference between them.  $p < 0.05$  was taken as a cutoff point for statistical significance. Chi-square test was done for categorized data while 2 samples t-test was used to compare between percentages.

#### RESULTS

A total of 250 women were asked at different sites to answer the questionnaire. 30 women were excluded from the study because 24 of them did not complete the survey due to time conflict with their duties, appointments, and other personal reasons while the remaining 6 had language barriers. Accordingly, a total of 220 interviews were done and were employed in the study.

##### Demographic data

The highest number of participants fell in the 45-55 age group that accounted for 39% of the total number, while the remaining age groups (20-34 years), (35-44 years), (56-70 years) accounted for 20%, 30%, and 12%, respectively, as shown in Fig. 1. According to Fig. 2, the majority of the subjects were Emirati (60%), whereas non-Arabs had the least percentage (10%).

In this study, two main cities were targeted which are Abu Dhabi and Sharjah. 54% were from Sharjah while the rest were from Abu Dhabi.

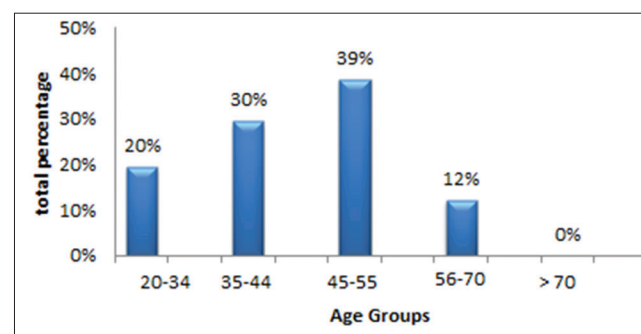


Fig. 1: Participants age groups distribution (n=220)

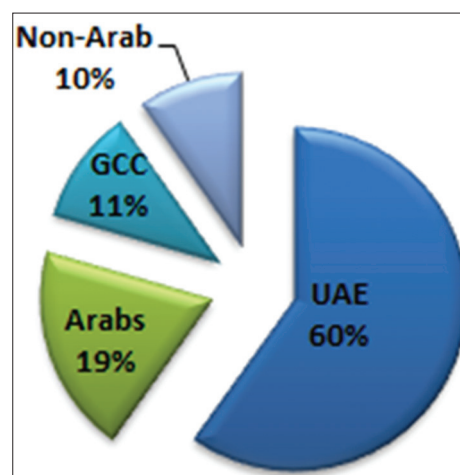


Fig. 2: Participants nationality distribution (n=220)

Regarding their marital status, 54% were married, 22% were single, 16% divorced, and remaining 8% were widowed. Almost half of the participants were homemakers (46%), whereas 35% were employees and the rest were still students. Fig. 3 shows the percentages of family histories of different medical conditions related to menopause and the use of HRT. When participants were asked about their lifestyles, more than three-quarter were nonsmokers (80%), however, most of the subjects were heavily caffeine consumers and did not exercise regularly.

**Postmenopausal symptoms**

Women were asked first if they ever had hysterectomy, only 7% of them answered yes. Half of the participants reported having irregularity in their menstrual cycles. The following question was about common menopausal symptoms that the participants might have experienced and persisted over time. As expressed in Fig. 4, the most common reported symptoms were mood swings, tiredness, insomnia, and irritability. Many of them experienced some troublesome symptoms such as depression, hot flashes, vaginal dryness, hair thinning, breast pain, memory lapses, and headache. Acne, facial hair growth, and leak of urine, when coughing, sneezing, or laughing, were the least reported symptoms.

**HRT use**

Almost half of them (48%) were using a variety of HRT to control their symptoms. The most common side effects associated with the use of HRT were breast tenderness (35%) and fluid retention (26%). Irregular vaginal bleeding (21%), vaginal discharge (17%), and nausea and vomiting (20%) came afterward.

Regarding the source of information about HRT, women were asked to choose from the different options given in the survey which were: Advertisements, books and articles, family and friends, and finally health care professionals (Physicians and pharmacists). The latter was chosen the most as their main source of information in both Abu Dhabi and Sharjah. However, a statistically significant difference was found between Abu Dhabi (68%) and in Sharjah (39%) ( $p < 0.05$ ). The second

most common answer was family and friends (Abu Dhabi 52% and Sharjah 31%), and the remainders came at last.

**HRT attitude and knowledge**

Regarding the attitude toward HRT, more than quarter of women living in Abu Dhabi thought that HRT was a good solution for women with menopausal symptoms, and 16% of Sharjah women thought the same ( $p > 0.05$ ). The percentages of women who had a negative attitude toward HRT were almost equal in both cities (Abu Dhabi 10.78%, Sharjah 14.41%,  $p > 0.05$ ).

Finally, subjects' knowledge about the benefits and risks of HRT use, Figs. 5 and 6, displayed a variety of benefits and risks of HRT use and the percentages of women who recognized them. Improving the mood, reducing hot flashes, and vaginal dryness were the most frequently chosen answers as benefits while the prevention of breast cancer and heart diseases had the least percentages. On the other hand, half of the participants were aware that breast and ovarian cancers are the most serious risks of HRT use while the majority did not choose lung cancer and gallstones as risks.

**DISCUSSION**

Menopause is considered as a natural stage that nearly all women go through at a certain point in their lives. With the rise in the elderly population experiencing menopause symptoms and its long-term consequences, the need for a solution to overcome this problem has grabbed the attention of the medical fields. HRT was found to have remarkable benefits for these women to manage their symptoms and improve their quality of life. Different studies showed that knowledge and attitudes toward menopause and HRT differ across regions and countries according to their social and cultural factors [1,14,33].

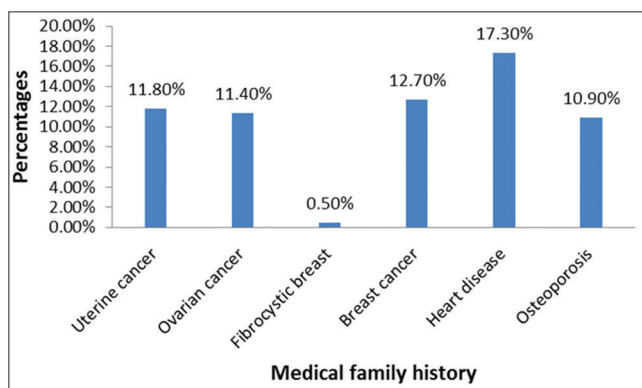


Fig. 3: The percentages of family histories of different medical conditions (n=220)

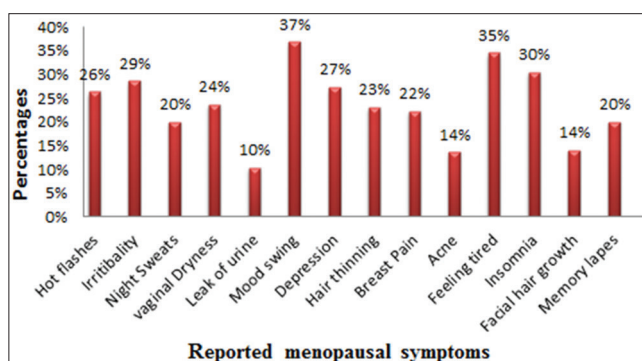


Fig. 4: Reported menopausal symptoms (n=220)

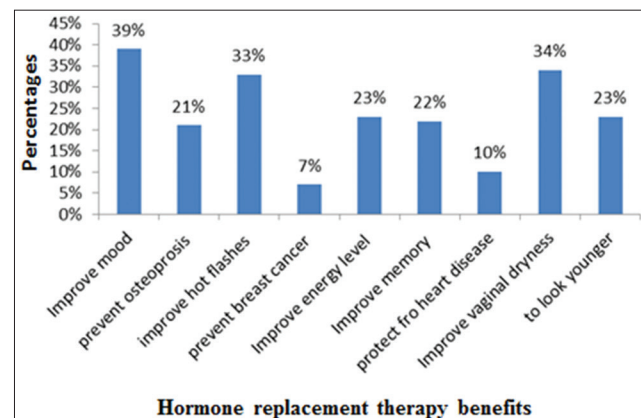


Fig. 5: The percentages of hormone replacement therapy benefits acknowledged by participants (n=220)

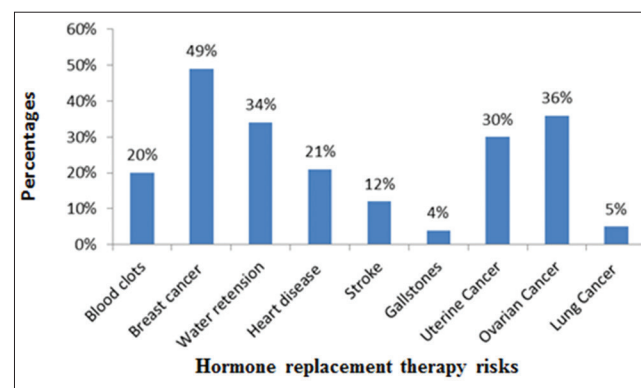


Fig. 6: The percentages of hormone replacement therapy risks acknowledged by participants (n=220)

This study included 220 women living in UAE, around 110 participants aged 45 or older. Our surveys were mostly distributed in health departments where most of the subjects interviewed were Emirati.

### Symptoms

This study revealed that mood swings and feeling tired were the most common symptoms reported by women in UAE (37%, 35%). Similar results were reported by other studies [27,36]. According to the European survey, mood swing was one of the highly reported symptoms in UK, Spain, Belgium, and Netherland [28]. Despite of the fact that "Hot flushes" is usually the most frequent postmenopausal symptom, women living in hot climate regions might be less sensitive to raised body temperatures, which explains our findings. On the other hand, these results are in contrast with previous studies conducted in UAE which reported "hot flashes" as the most common symptom [4,7].

### Prevalence of hormone therapy (HT) use and reported side effects

This study showed that the prevalence of HT use including oral contraceptive and HRT was 48%. This indicates that HT is popular among women and physicians in UAE. Several other studies reported similar level of use [28,32,34,37,38]. Research had shown that previous users of oral contraception are more willing to use HRT during menopause [39,40]. According to Rose survey which was conducted in the USA in 2015, HT use among young females was found to be higher than postmenopausal women [38]. This could explain the high level of use in our study; hence, our population included pre, postmenopausal, and young women, while the other studies included women aging 40 years old and above only such as a previous study conducted in UAE, in 1998, which reported a level of 19.4% only [4]. In addition, countries in the neighborhood also reported lower levels. A study conducted in Bahrain reported a prevalence of only 0.4% [16]. Another study in Saudi Arabia reported only 5% use [41]. Low level of HT use could be due to the preference of women in these regions to use natural remedies rather than medications [12].

Side effects are the most frequent reason to stop HRT [28,32,42,43]. Our study was the first to investigate the prevalence of side effects among HRT users in UAE. It was shown that the most frequent side effects reported with HRT use were breast tenderness (35%) and fluid retention (26%). This is identical to the results reported by a study conducted in Thailand [32].

### Source of information about HRT

Women are using several sources for information about general health and HRT. Media, Family, and friends can provide misleading information about HRT, which might affect the level of use [12,13,44]. On the other hand, physicians are capable of providing updated information while assuring assessing potential benefits and risk in each patient [33].

This study revealed that the main source of information for HRT was physicians. Similar results had been reported by several other studies [1,28,32,38,43]. This might explain the high level of use of HT among women in UAE as physicians have a strong influence on patients. According to Lwein *et al.*, (2003) women who had never used HRT are more willing to use it if it was recommended by their [37]. A study conducted in Spain showed that one of the most common reasons for using HRT was physician recommendation [42]. Physician's habit in prescribing HT can also play a major role in the level of use. This might predict that the number of HT prescriptions in UAE is high.

However, when comparing Sharjah and Abu Dhabi, a statistically significant difference was found between the two cities. This indicates that the medical awareness through pharmacists and physicians is higher in Abu Dhabi than Sharjah. Another explanation is the easy access and better healthcare system in Abu Dhabi as well as better qualification comparing to Sharjah. Moreover, this could reflect that women in Abu Dhabi might be more educated, and there are stronger communication and counseling between the health care professionals and the society.

### Education level and occupation effect on knowledge about HRT

About 54% of this study population was employees or university students, which may indicate good knowledge about HRT and explains the high prevalence of their use. Several studies had shown that awareness and knowledge about menopause and HRT is higher among women with high level of education [7,14,33,36,45]. Knowledge is also higher among workers with professional occupations [12,42,46]. These women will more probably visit a physician for menopause symptoms [15], as their jobs require them to be alert and active all the time, without the limitations of the menopause symptoms [42].

### Awareness of HRT benefits and risks

In this study, improving mood and postmenopausal symptoms were the most frequent benefits acknowledged by participants. Only few were aware of the benefit of HRT in the prevention of breast cancer, osteoporosis, and heart diseases. Several other studies supported these findings [28,34,38]. This might indicate that women are using HRT mostly for their short-term benefits rather than their long-term benefits, as well as the lack of awareness of the long-term complications of menopause.

This study also revealed that the most frequent mentioned risk of HRT use was breast cancer (49%). According to the Asian menopause survey, both Thailand and Hong Kong participants reported similar percentages (53% and 51%) [32,34]. These findings were also supported by other studies [28,47]. Women were also aware of the other risks associated with HRT use such as: Ovarian cancer (36%), uterine cancer (30%), cardiovascular disease (21%), and deep vein thrombosis (20%). This indicates a high level of awareness among women in UAE, which could be because physicians are their common source of information rather than media or family. This contradicts with the results of a previous study conducted in Al Ain, UAE, which showed a poor knowledge among participants. According to Samia *et al.* (2014) despite the physician contact with the patients, they did not discuss issues related to menopause with 87% of its participants, and they mainly depended on family and friends as their resources of information [7].

### Attitude

In our study, we found that participants, in general, had a positive attitude toward HRT. Only a few had chosen the statement that HRT should be avoided, in both cities Abu Dhabi and Sharjah (10.78%, 14.41%). Most women believed that HRT is good option, especially for ladies suffering from menopause symptoms. The European menopause survey conducted, in 2005, reported similar findings [28]. Several studies had shown that discussing HT with physicians increase the positive attitude toward HRT [43,48]. This can explain the positive attitude among our participants. Good awareness of risks and benefits of HRT along with positive attitude could be another explanation for the high level of HRT use in our population.

### CONCLUSION

In conclusion, there was a positive attitude toward HRT use and its possible benefits and risks in our interviewed subjects from Abu Dhabi and Sharjah. In Addition to that, the participant's major source of information about HRT was through health care professionals. However, their knowledge about long-term complications of menopause was poor. This brings the need to grab more attention over this issue by raising awareness among women through educational campaigns about the menopause, its major health outcomes and its treatment options.

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