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Research Article

# Knowledge and Perception toward Menopause among Saudi Women Attending Primary Care Clinics; Riyadh, Saudi Arabia

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## Abstract

**Background:** Menopause is a period in woman life that characterized by the permanent cessation of menses. Several symptoms can be experienced by the female as a result of menses cessation including hot flushes and mood swings, these symptoms may affect her life.

**Objective:** To assess the knowledge and perception toward menopause and to identify factors that may affect the knowledge and perception of Saudi women attending general clinics, Al Wazarat health center, Prince Sultan Military Medical City (PSMMC), Riyadh.

**Methods:** A cross-sectional study was conducted in November 2017. In total, 374 women aged 20-60 years were randomly interviewed using questionnaire interviewer-administered. The interview was based on a validated Arabic translated version of the pre-designed and validated questionnaire used on a previous similar study with adoption to our setting.

**Results:** Of the 374 women, a total of 362 questionnaires/interviews were completed with a response rate of 96%. About half of our population (51.38%) showed good knowledge. About ninety percent (89.2%) were not aware of any menopausal age diseases and (98.9%) were not aware of any treatments available for menopausal symptoms. Participants in their thirties and those who were married had more knowledge than other participants, also women with primary or intermediate education and housewives had more knowledge than other women. Regarding perception, 97.23% of participants had a positive perception.

**Conclusion:** Level of knowledge is considered average compare to similar studies but there were areas that showed significant lack of knowledge, about ninety percent (89.2%) were not aware of any menopausal age-related diseases and (98.9%) were not aware of any treatments available for menopausal symptoms. We have much more positive perception than similar studies.

**Keywords:** Knowledge; Perception; Menopause; Attitude; Saudi women

## Introduction

The menopause reflects a natural female life stage, which is characterized by an ongoing halt in monthly cycles for a period of over a year. It represents the end of a woman's fertile capabilities [1,2]. Three main female life phases can be defined according to menstrual frequency: (i) pre-menopause, which defines women with regular periods in the preceding 12 months; (ii) peri-menopause, i.e. those with infrequent menses over the previous 12 months or amenorrhea for between 3 and 12 months; and (iii) post-menopause, which refers to females who have experienced no menses for at least a year [1]. The menopause can also be categorized according to the age of onset, i.e. natural, early and premature, which commence at 45-50 years, <45 years and <40 years, respectively.

The gradual decline in estrogen titres during the peri-menopause and menopause may give rise to hot flushes, night sweats, mood swings and additional issues which may affect life quality [3-5]. During this time, females have a higher incidence of osteoporosis, cardiovascular disease and depression [6,7].

There is a correlation between a positive attitude and optimal menopausal management [8]. The aim of the current research is to assess the knowledge and perception of Saudi females towards the menopause and to recognize elements, which influence these factors in this population, with the overall objective of enhancing their awareness and perception through the implementation of educational programs on the subject.

## Method

A cross-sectional study was conducted in November 2017 using questionnaire interviewer-administered among Saudi women aged 20-60 years attending general clinics, Al Wazarat health center, Prince Sultan Military Medical City (PSMMC), Riyadh. We included all Saudi women aged 20-60 years attending general clinics in Al Wazarat health center. The sample size was determined to be 340 using the equation and data results of Hamid S, et al. where they found that 67% had poor knowledge. We considered our population's size to be greater than 20,000 [9].

$$Sample\ size = \frac{Z^2 P(1-P)}{\delta^2} \quad \frac{1.96^2(0.67)(033)}{0.05^2} = 340$$

Where Z represents the Z value for 95% confidence interval=1.96, P is the prevalence of interest from previous studies, and δ denotes an error tolerance of 0.05. For P, 67% had poor knowledge. 10% of the calculated sample size was added in order to take non-response into consideration (340+34=374).

The study was carried out over ten consecutive working days interviewing every day 38 women till completing the sample size, the participant was selected by simple random sampling between numbers from 1 to 3 using random.org iPhone app as 3rd adult female entering the waiting area. The chosen subjects were interviewed one by one in two cohorts by two qualified females in a semi-structured format in a private area in proximity to the clinical waiting location.

The interview was founded on an authenticated pre-generated questionnaire utilized in earlier equivalent research [9], which had been translated into Arabic and modified for the current context. The translation had been authenticated with double translation from English to Arabic and then to English once more by two independent qualified translators. two sections of the original questionnaire regarding knowledge, attitude and practice toward hormonal replacement therapy was not included in our study because hormonal replacement therapy not frequently used in our community and not from our objectives in this study, The views of two consultants on the questions were sought. A pilot study was then performed on a cohort of 10 subjects; the Arabic version of the questionnaire was deployed in order to acquire their perspective on question clarity and as a means to train the interviewers.

The questionnaire consisted of an introduction page and three parts. The introduction page contained the study title, the objective of the study, informed consent and researcher contacts. Part one of the questionnaire contained the sociodemographic. characteristics including the menstrual status which was determined based on the participant description of their current menstrual status, The following definitions were used: (i) pre-menopause=the presence of regular menses; (ii) peri-menopause=Changes in periods, but have not gone 12 months in a row without a period, not stopped completely, or have occasional spotting; and (iii) post-menopause=no menses.

The second part encompassed 20 threads pertaining to the subjects' knowledge about the menopause, such as mean age of onset, recognition of associated symptomatology, awareness of the increased risk of certain disorders, e.g. osteoporosis and heart issues, and awareness of therapies available for related symptoms. A score for the 20 items was designed, where 1=true, and 0=false or don't know. Total scores of 0-10 and 11-20 were deemed to represent poor and good knowledge, respectively.

The final part of the questionnaire comprised a mixture of 7 positive and negative declarations. Responses were ranked where agree to positive statement or disagree to negative statement=1, and opposite or don't know=0. Positive and negative perceptions were defined by summated scores of 4-7 and 0-3, respectively.

The Statistical Package for the Social Sciences software, version 21.0, was used for data analysis. Descriptive statistics, i.e. frequency and proportion, were used for categorical variables such as gender, marital status, educational level and menopausal symptom recognition. Categorical variable relationships were evaluated utilizing a chi-square test; independent t-tests were used for the continuous variables. Age was expressed as mean ± standard deviation. Significance was defined as a $p<0.05$.

Ethical considerations approval was obtained for this study from the research ethics committee, the central region at Prince Sultan Military Medical City (Reg. #HAP-01-R-015) project NO. 953 Date of approval 02 May 2017. Approval for data collection in Al Wazarat health center was obtained. All participants gave informed consent prior to the interviews. Potential subjects had the choice to take part in the study; their anonymity and privacy were assured. The main researcher gave their consent for the questionnaire to be employed for this work.

## Results

Of the 374 women asked to participate in the study 12 did not complete the interview or refuse to take it due to time conflict with their appointment or being severely sick. A total of 362 questionnaire interviews were therefore completed and subject to analysis, giving a response rate of 96%. Although the study was designed for the interviewer to administer the questionnaires, some subjects preferred to complete them alone.

Forty-two percent of participants are in their thirties and less than 10 percent aged 50 or older. Most females were married 321 (88.7%). Almost 208 (57.8%) had an income of 5000-<10000 SR. More than third 136 (37.6%) had primary or intermediate education and 85 (23.5%) had a secondary school education. The large majority of women were housewives 313 (86.5%).

About three quarters 265 (73.2%) subjects fell in the pre-menopause category, reporting menses at regular intervals and 78 (21.5%) described alterations that suggested they were peri-menopausal (Table 1). General health was described as being very good to good, less good, and bad to very bad in 293 (80.9%), 51 (14.1%) and 18 (5%), respectively.

| Demographic variable | | n=362 | Percentage |
|---|---|---|---|
| Age group | 20-29 | 92 | 25.4 |
| | 30-39 | 152 | 42.0 |
| | 40-49 | 85 | 23.5 |
| | 50-59 | 25 | 6.9 |
| | 60 or above | 8 | 2.21 |
| Marital status | Single | 23 | 6.4 |
| | Married | 321 | 88.7 |
| | Divorced | 7 | 1.9 |
| | Widow | 11 | 3.0 |
| Monthly income (SAR) | <5000 | 115 | 31.8 |
| | 5000 - <10000 | 208 | 57.5 |
| | 10000 or more | 39 | 10.8 |
| Education | Illiterate | 52 | 14.4 |
| | Read and write | 48 | 13.3 |
| | Primary - intermediate | 136 | 37.6 |
| | Secondary school | 85 | 23.5 |
| | University | 41 | 11.3 |
| Occupation | Housewife | 313 | 86.5 |
| | Employee | 31 | 8.6 |
| | Student | 18 | 5.0 |
| Menstrual status | Pre-menopause | 265 | 73.2 |
| | Peri-menopause | 78 | 21.5 |
| | Post-menopause | 19 | 5.2 |

**Table 1:** Socio-demographics of participants.

Most women were aware of the age of menopause onset, i.e. 337 (93.1%); the average age described was 51 years. 334 (95%) recognized the menopause a natural transition in women ‘s life, but a small cohort 9 (2.5%) believed that it was a clinical issue requiring therapy. Symptomatology associated with the menopause recognized by the subjects is displayed in Table 2.

| Symptoms | Number (Percentage) n=362 |
|---|---|
| Mood swings | 268 (74.0) |
| Depression | 267 (73.8) |
| Insomnia | 244 (67.4) |

| | |
|---|---|
| Hair thinning | 237 (65.5) |
| Feeling more tired than usual | 233 (64.4) |
| Hot flashes | 214 (59.1) |
| Irritability | 212 (58.6) |
| Leak of urine when coughing, sneezing or laughing | 203 (56.1) |
| Difficulty concentration | 201 (55.5) |
| Vaginal dryness | 194 (53.6) |
| Breast Pain | 191 (52.8) |
| Weight gain | 189 (52.2) |
| Night Sweats | 175 (48.3) |

**Table 2:** Knowledge of symptoms of menopause.

The large majority of females 355 (98.1%) stated that their doctors did not discuss menopause with them. First when asked in general about diseases that the women are more prone to after menopause nearly ninety percent 323 (89.2%) said that they didn't know any disease that women become more susceptible after menopause than before menopause. After asking specifically more than half 240 (66.3%) of women thought that menopause was a risk for osteoporosis while only 28 (7.7%) thought that menopause was a risk for heart disease, 93 (25.7%) did not think that and 241 (66.6%) said they did not know. The large majority of participants 358 (98.9%) were not aware of any treatment available for menopausal symptoms. Using our knowledge score we found that 186 (51.38%) of participants had good knowledge about menopause.

Regarding knowledge, age, marital status, education, and occupation were significantly associated with knowledge (P-value=0.029, 0.034, <0.0001, 0.01) respectively. Participants in their thirties and those who were married had more knowledge than other participants, also women with primary or intermediate education and housewives had more knowledge than other women. Income, period status and perception of health had no significant effect on the presence of knowledge (Table 3).

| **Variable** | | **Knowledge Number (percentage)** | | **p-value** |
|---|---|---|---|---|
| | | Present Total:186 | Absent Total: 176 | |
| **Age group** | 20-29 | 36 (19.4) | 56 (31.8) | 0.029 |
| | 30-39 | 87 (46.8) | 65 (36.9) | |
| | 40-49 | 46 (24.7) | 39 (22.2) | |
| | 50-59 | 11 (5.9) | 14 (7.9) | |
| | 60 or above | 6(3.3) | 2(1.1) | |
| **Marital status** | Single | 6(3.2) | 17 (9.7) | 0.034 |
| | Married | 169(90.9) | 152 (86.4) | |
| | Divorced / Widow | 11(5.9) | 7(4.0) | |
| **Monthly income (SAR)** | <5000 | 68(36.6) | 47(26.7) | 0.059 |
| | 5000-<10000 | 103(55.4) | 105(59.7) | |
| | 10000 or more | 15(8.1) | 24(13.6) | |

| | | | | |
|---|---|---|---|---|
| **Education** | Illiterate | 28(15.1) | 24(13.6) | 0.000 |
| | Read and write | 20(10.8) | 28(15.9) | |
| | Primary-intermediate | 89(47.8) | 47(26.7) | |
| | Secondary school | 38(20.4) | 47(26.7) | |
| | University | 11(5.9) | 30(17.0) | |
| **Occupation** | Housewife | 170(91.4) | 143(81.3) | 0.010 |
| | Employee | 12(6.5) | 19(10.8) | |
| | Student | 4(2.2) | 14(8.0) | |
| **Menstrual status** | Pre-menopause | 139(74.7) | 126(71.6) | 0.121 |
| | Peri-menopause | 34(18.3) | 44(25.0) | |
| | Post-menopause | 13 (7.0) | 6(3.4) | |
| **Health perception** | Very good | 69 (37.1) | 68 (38.6) | 0.544 |
| | Good | 81 (43.5) | 75 (42.6) | |
| | Not so good | 24 (12.9) | 27 (15.3) | |
| | Bad/Very Bad | 12 (6.5) | 6 (3.4) | |

**Table 3:** Association between knowledge and different variables.

Regarding the perception of participants, we asked females about their views about menopause, nearly three quarters had positive views of menopause: 274 (75.7%) said that menopause was good in a way that there was no more periods, 266 (73.5%) stated that menopause mean no more worries about pregnancy and contraception and more than half 209 (57.7%) reported that psychological problems were due to life changes not hormonal changes, while negative views came as 340 (93.9%) thought that menopause means loss of fertility, 280 (77.3%) means loss of youth, 268 (74%) said that it bothersome stage in woman‘s life and only 106 (29.3%) mentioned that menopause mean loss of femininity, (Table 4). Using our perception score we found that 325 (97.23%) of participants had a positive perception.

| **Attitude** | **Agree** | | **Disagree** | | **Not sure** | |
|---|---|---|---|---|---|---|
| | **No** | **%** | **No** | **%** | **No** | **%** |
| **Positive** | | | | | | |
| Menopause is good in a way that there is no more periods | 274 | **75.7** | 64 | **17.7** | 24 | **6.6** |
| Menopause means no more worries about pregnancy and contraception | 266 | **73.5** | 77 | **21.3** | 19 | **5.2** |
| Psychological problems are due to life changes, not hormonal changes | 209 | **57.7** | 111 | **30.7** | 42 | **11.6** |
| **Negative** | | | | | | |
| Menopause means loss of fertility | 340 | **93.9** | 12 | **3.3** | 10 | **2.8** |
| Menopause means loss of youth | 280 | **77.3** | 65 | **18.0** | 17 | **4.7** |
| Bothersome stage in a woman's life | 268 | **74.0** | 30 | **8.3** | 64 | **17.7** |
| Menopause means loss of femininity | 106 | **29.3** | 233 | **64.4** | 23 | **6.4** |

**Table 4:** Attitude of females towards menopause.

Regarding perception, only education and occupation were significantly associated with positive perception (P-value=0.02, 0.03) respectively. Participants with primary or intermediate education and housewives had more positive perception among all other participants (Table 5).

| Variable | | Perception Number (percentage) | | p-value |
|---|---|---|---|---|
| | | Positive Total: 325 | Negative Total: 37 | |
| **Age group** | 20-29 | 85 (26.2) | 7 (18.9) | 0.525 |
| | 30-39 | 138 (42.5) | 14 (37.8) | |
| | 40-49 | 73 (22.4) | 12 (32.4) | |
| | 50-59 | 21 (6.4) | 4 (10.8) | |
| | 60 or above | 8 (2.4) | 0 (0.0) | |
| **Marital status** | Single | 20 (6.2) | 3 (8.1) | 0.443 |
| | Married | 288 (88.6) | 33 (89.2) | |
| | Divorced / Widow | 17 (5.2) | 1 (2.7) | |
| **Monthly income (SAR)** | <5000 | 104 (32.0) | 11 (29.7) | 0.239 |
| | 5000-<10000 | 189 (58.2) | 19 (51.4) | |
| | 10000 or more | 32 (9.8) | 7 (18.9) | |
| **Education** | Illiterate | 48 (14.8) | 4 (10.8) | 0.023 |
| | Read and write | 42 (12.9) | 6 (16.2) | |
| | Primary-intermediate | 128 (39.4) | 8 (21.6) | |
| | Secondary school | 78 (24.0) | 7 (18.9) | |
| | University | 29 (8.9) | 12 (32.4) | |
| **Occupation** | Housewife | 288 (88.6) | 25 (67.6) | 0.033 |
| | Employee | 20 (6.2) | 11 (29.7) | |
| | Student | 17 (5.2) | 1 (2.7) | |
| **Menstrual status** | Pre-menopause | 242 (74.5) | 23 (62.2) | 0.206 |
| | Peri-menopause | 66 (20.3) | 12 (32.4) | |
| | Post-menopause | 17 (5.2) | 2 (5.4) | |
| **Health perception** | Very good | 129 (39.7) | 8 (21.6) | 0.093 |
| | Good | 137 (42.2) | 19 (51.4) | |
| | Not so good | 42 (12.9) | 9 (24.3) | |
| | Bad/Very Bad | 17 (5.2) | 1 (2.7) | |

**Table 5:** Association between perception and different variables.

## Discussion

In the present study the most known menopause symptoms were mood swings, depression and insomnia, while night sweets was the least known symptom. A previous Saudi study using menopause-rating scale to assess prevalence of symptoms it was found that the most experienced menopausal symptoms were joint and muscular discomfort following by physical and mental exhaustion, whereas the least symptom was sexual problems [10]. Several Asian studies reported similar results to that of the Saudi study [5,11-13]. One Saudi study reported that hot flushes and excessive sweating were the most common symptoms experienced by women, also change in mood was experienced by high percent [14].

Hot flashes, mood swings, depression and insomnia represented 58%, 58%, 49% and 49% as known by participants from UAE study, while the least symptom reported was facial hair growth [9], which is near to the true order of most experienced symptoms by peri-menopausal and post-menopausal women shown in several studies worldwide and that can be attributed to the age of UAE participants is near to menopause age but overall, we have higher frequency of knowledge and that can be attributed to that we have more women with primary-intermediate education as several studies shows association between knowledge and education [9,15-17].

The current study revealed that there was a good knowledge among (51.38%) of women while UAE study [9], showed that only (33%) had good knowledge among females which is lower than ours that can be attributed to that we have more women with primary-intermediate education.

A study carried out in Botswana found that 51% of females judged their knowledge of this life stage to be poor [18]. In a study in Iran on non-menopausal females with the use of a self-completed questionnaire, poor, moderate and good knowledge was evidenced by 8%, 68% and 38.5% of subjects, respectively [15]. The figures from the current study can therefore be deemed to represent the average level of knowledge, being greater than in the study from UAE [9], similar to the statistics published from Botswana [18] and poorer than those from Iran [15].

Discrepancies in these knowledge levels could arise as a result of the varied age ranges and menstrual stages of the study cohorts. In contrast to the other studies, the current study population contained a more varied age range and encompassed a higher proportion of females at the pre-menopausal phase. Additionally, the study methodologies were at variance in relation to the questions and scoring methods used to assess knowledge.

Regarding factors affecting the knowledge: menstrual status has not been associated with the level of knowledge in the UAE study [9] and this is consistent with our findings. Being employed has been associated with more knowledge in previous studies [16,18] in contrast to our study were being housewives associated with more knowledge and this could be due to that (86.5%) of our population are housewives.

Despite that about half of our population (51.38%) showed good knowledge there were areas that showed significate lack of knowledge, About ninety percent (89.2%) and (98.9%) weren't aware of any menopausal age diseases or treatments available for menopausal symptoms respectively and that can be attributed to that (98.1%) stated that their doctors didn't discuss menopause with them hence the significance of education intervention has been shown to improve the level of knowledge in a five years follow-up intervention study [19].

A positive perception towards the menopause was seen in 97.23% of the current study subjects; this is greater than the equivalent data of 60%, 81% and 47% from studies undertaken in the UAE [9], Iran [15] and Pakistan [20], respectively. These discrepancies could be ascribed to varying population ages and menstrual status; the current population comprised a larger age spectrum and a higher percentage of pre-menopausal females. Additionally, the methods to assess and to score perception levels were at variance amongst the studies.

An earlier Saudi Arabian study [21], demonstrated that a more youthful age was linked with a positive perception towards the menopause. In the current population, no relationship between age and perception was seen, with only education status, i.e. primary or intermediate education, and occupation, i.e. as a housewife, associated with a positive perception. Previous work has suggested that perception was related to female traits, such as job, education and economic status satisfaction, positive perception was associated with employed satisfied and well-educated females [15].

## Conclusion and Recommendations

The most known menopause symptoms were mood swings, depression and insomnia. About half of our population (51.38%) showed good knowledge, which is considered average compare to similar studies, but there were areas that showed significant lack of knowledge, about ninety percent (89.2%) were not aware of any menopausal age diseases and (98.9%) weren't aware of any treatments available for menopausal symptoms. Participants in their thirties and those who were married had more knowledge than other participants, also women with primary or intermediate education and housewives had more knowledge than other women. Regarding perception, 97.23% of participants had positive perception, which is much higher than similar studies.

In the future, we recommend doing multicenter study of Saudi women on different geographical locations to get a better sense of the level of knowledge and perception hence our study done on women attending Al Wazarat primary care clinics which have special characteristics and may not give the whole picture

about Saudi women. Also we recommend that doctors discuss with their patient menopause issues which has shown to improve dealing with emotional and practical aspects of menopause.

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## References

1. World Health Organization (1996) Research on Menopause in the 1990s: Report of WHO Scientific Group. World Health Organ Tech Rep Ser 866: 1-107.
2. Harlow SD, Gass M, Hall JE, Lobo R, Maki P, et al. (2012) Executive summary of the Stages of Reproductive Aging Workshop + 10: addressing the unfinished agenda of staging reproductive aging. Menopause 19: 387-395.
3. Avis NE, Brockwell S, Colvin A (2005) A universal menopausal syndrome? Am J Med 118: 37-46.
4. Budakoğlu II, Ozcan C, Eroğlu D, Yanik F (2007) Quality of life and postmenopausal symptoms among women in a rural district of the capital city of Turkey. Gynecol Endocrinol 23: 404-409.
5. Peeyananjarassri K, Cheewadhanaraks S, Hubbard M, Manga RZ, Manocha R, et al. (2006) Menopausal symptoms in a hospital-based sample of women in southern Thailand. Climacteric 9: 23-29.
6. Pinkerton JV, Stovall D (2010) Reproductive aging, menopause, and health outcomes. Ann NY Acad Sci 1204: 169-178.
7. AlQuaiz AM, Kazi A, Habib F, AlBugami M, AlDughaither A (2017) Factors associated with different symptom domains among postmenopausal Saudi women in Riyadh, Saudi Arabia. Menopause 24: 1392-1401.
8. Kwak EK, Park HS, Kang NM (2014) Menopause knowledge, attitude, symptom and management among midlife employed women. J Menopausal Med 20: 118-125.
9. Hamid S, Al-Ghufli FR, Raeesi HA, Al-Dliufairi KM, Al-Dhaheri NS, et al. (2014) Women's knowledge, attitude and practice towards menopause and hormone replacement therapy: A facility-based study in Al-Ain, United Arab Emirates. J Ayub Med Coll Abbottabad 26: 448-454.
10. AlDughaither A, AlMutairy H, AlAteeq M (2015) Menopausal symptoms and quality of life among Saudi women visiting primary care clinics in Riyadh, Saudi Arabia. Int J Womens Health 7: 645-653.
11. Bairy L, Adiga S, Bhat P, Bhat R (2009) Prevalence of menopausal symptoms and quality of life after menopause in women from South India. Aust N Z J Obstet Gynaecol 49: 106-109.
12. Waidyasekera H, Wijewardena K, Lindmark G, Naessen T (2009) Menopausal symptoms and quality of life during the menopausal transition in Sri Lankan women. Menopause 16: 164-170.
13. Ayranci U, Orsal O, Orsal O, Arslan G, Emeksiz DF (2010) Menopause status and attitudes in a Turkish midlife female population: an epidemiological study. BMC Womens Health 10: 1.
14. Al-Olayet AY, Al-Qahtani IF, Al-Essa DI, Al-Saleek FH, Al-Moutary RN, et al. (2010) Severity of menopausal symptoms, and knowledge attitude and practices towards menopause among Saudi women. Scientific Research and Essays 5: 4077-4079.
15. Noroozi E, Dolatabadi NK, Eslami AA, Hassanzadeh A, Davari S (2013) Knowledge and attitude toward menopause phenomenon among women aged 40-45 years. J Educ Health Promot 2: 25.
16. Jassim GA, Al-Shboul QM (2009) Knowledge of Bahraini women about the menopause and hormone therapy: implications for health-care policy. Climacteric 12: 38-48.
17. Donati S, Cotichini R, Mosconi P, Satolli R, Colombo C, et al. (2009) Menopause: knowledge, attitude and practice among Italian women. Maturitas 63: 246-252.
18. Ama NO, Ngome E (2013) Menopausal Perceptions and Experiences of Older Women from Selected Sites in Botswana. Advances in Sexual Medicine 3: 47-59.
19. Hunter M, O'Dea I (1999) An evaluation of a health education intervention for mid-aged women: five year follow-up of effects upon knowledge, impact of menopause and health. Patient Educ Counsel 38: 249-255.
20. Malik HS (2008) Knowledge and attitude towards menopause and hormone replacement therapy (HRT) among postmenopausal women. J Pak Med Assoc 58: 164-167.
21. Al Mehdar A, Zaki HM, Alotaibi FA, Alyani AA, Ali T, et al. (2017) Features of Menopause and Menopausal Age among Saudi Women. Egyptian Journal of Hospital Medicine 69: 2809-2813.