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# Evaluating the around and after Menopausal Symptoms and Personal Perception of Quality of Life among Women in Qatif, Saudi Arabia, Attending the Hospital and PHCs

**Saleh Aljarudi[1*], Hayat Al-Jumah[2], Abrar Al-Jumah[2]**

[1]Maternity and Children Hospital, Dammam, Saudi Arabia
[2]Qatif Central Hospital, Qatif, Saudi Arabia
Email: *abraraljumah7@gmail.com

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## Abstract

**Background:** Menopause is a period where natural cessation of menses occurs, some quality of life characteristics changes with some symptoms associated with this time such as hot flushes and anxiety. **Objective:** To evaluate and specify the level of impact of these symptoms on the quality of life among women in the Qatif area, Saudi Arabia and to study the factors that may involve in their perception. **Methods:** A cross-sectional study was conducted of 151 women aged 40 - 60 years old interviewed at either hospital or PHCs, a translated and revised questionnaire of other studies with some adoption. **Results:** 151 women out of 200 participated in questionnaires, majority of them were highly educated having at least a bachelor's degree around 80%, and around 75% of participants were either working or retired, with a moderate level of income and enjoying a good lifestyle 93% in around and 97% in the after menopause. With the majority, were not used hormones 95% or conceptive pills 91%, personal perception of health were high around 93% for around and 97.2% for after menopause with no significant statistical difference between the two groups. **Conclusion:** Perception and knowledge of menopause were very high, with no differences in the severity of symptoms of the four QOL domains for the around or after menopause among the participants. High level of education and increased level of income and knowledge of the participants may play an important role in the result, so further investigation is advised.

## Keywords

Menopause, Quality of Life (QOL), Vasomotor

## 1. Introduction

The quality of life and life expectancy in recent time has been increased for human beings in general and for women during the menopausal period, however, the quality of life women around or after menopause is still considered a public health issue in some environments. The menopausal period is an adaptation process that occurs when women pass through a new biological status, some changes at psychological and mental processes [1] that are characterized by cessation of menses resulting from reduced hormone production at age above 45 - 55 years old [2].

Women during this time may experience some bothering symptoms such as hot flushes, change in mood, sweating at night depression, and some other symptoms. Duration and severity are different from one woman to another that depend on several personal and environmental factors which may affect their life and interaction with family and society [3].

The symptoms of these changes can be divided into four domains: vasomotor symptoms which are common conditions in the middle of life and after-menopause [4] [5]. Psychological symptoms are associated with anxiety or nervous and, physical fatigue, and reduced stamina as a result of reduction or change in the estrogen hormones. Some other symptoms are thought to be associated with sex hormones such as vaginal dryness, hot flushes, and night sweats, researches have shown that at least one or more of these changes or symptoms women may suffer during the transition time at the postmenopausal stage [6].

Improving the health perception and well-being of the group of women at this period will improve not only, the health of women but also the wellbeing of families and communities as a whole, this could be improved via the increase of care, nurturing, and education [7]. Besides that this may increase their productivity work and occupation [8] [9].

The mean age of menopause is thought to be around 46 years old [10] however, it may be older ages in western countries that may be due to the differences in the socio-cultural environment and personal attitude as they are considered positive or normal physiological changes [10]. A study in Saudi Arabia showed that hot flashes, sweetness, vaginal dryness, and sexual problems are common ones and the most severe frequently occurring symptoms were hot flushes and excessive sweating [10] [11]. Another studies showed that up to 40% of women in Sweden experience vasomotor symptoms which continue until the age of 64 years [12].

Studies in western countries conducted in different socio-cultural environments showed a better understanding of the personal perception of the quality of life and the experience of menopausal symptoms, however, in Middle East countries evidence is still not yet well fully understood [13].

This study is an attempt to evaluate and report the differences in the quality of life among women at around and after-menopause in Saudi Arabia. This is to fill the gap by identifying the differences and comparing the data with the neigh-

boring regions, the current study was conducted to reveal the influence that affects the quality of life and symptoms during the two periods, as well as to promote and increase awareness via education.

## 2. Ethical Approval

Ethical approval for this study obtained from Qatif IRB committee. The study conducted at the hospital and primary health care centers on women who attended Gynecological clinics in the Qatif area, Saudi Arabia.

## 3. Methods

A cross-sectional study conducted of 151 women attended at either hospital or PHCs; whom in the OBGYN clinic where asked to answer the questions of a translated and revised questionnaire below, during year 2021.

### 3.1. Subjects Criteria and Tools

Women aged between 40 and 60 years, Free from medical conditions e.g. diabetes, and hypertension. Data collected in two ways, by asking, the participants or giving them the 29 questionnaire items. Participants have to choose whether to have the symptoms or not, if yes, they complete the 5-point Likert scale. The obtained information was coded and analyzed using SPSS version, 23 IBM Corp, New York, USA). Descriptive statistics were used to analyze data frequency and percentage, mean median and SD; Chi-square $X^2$), t-test was used to estimate the significance difference of p-value at <0.05, and in case the result was 0.001 considered highly significant.

### 3.2. Validity and Reliability of the Questionnaire

A menopause-Specific Quality of Life (MENQOL) questionnaire was used [4]. The 29 items constitute four domains Vasomotor, Physical, Psychosocial, and Sexual domains. Experts translated the English version of the MENQOL to a revised Arabic language, pilot study of 10 participants was to make sure understanding the questions included in the total, and the score range of the four domains was different as it depends on the number of items. Participants were divided into two groups either around or (fluctuated period) menopause and after menopause (no period at all).

## 4. Result

Results were divided into three main sections; demographic characteristics, menopausal symptoms, and quality of life (QOL) characteristics among the around and after the menopausal period.

### 4.1. Socio-Demographic Characteristics of the Women

A total of 151 random women who visited the hospital or PHC were invited to participate in the study 115 (76.2%) were around menopause and 36 (23.8%) af-

ter menopause all of them were Saudi citizens from different provinces where Eastern was the greatest 134 (88.7%), more than 40% were retired. Around one-third of the participants were at age of 56 years old and above, the majority 126 (83.4%) were married and 60% have four or more children, their income was concentrated at a moderate level of income, Table 1.

### 4.2. Lifestyle Characteristics

The majority of the participants did not use either hormones, or conceptive pills [109 (72.2%), 35 (23.2%)] and [104 (68.9%), 33 (21.9%)] for around and after menopause respectively. Moreover, it is true for the majority of them not smoking and not practicing sports [110 (72.8%), 36 (23.8%) and [65 (43.0%), 21 (13.9%)] for around and after menopause respectively, finally for those who are non-driving and driving [58 (38.4%,) 22 (14.6%)], [57 (37.7%) 14 (9.3%)] respectively. However, there were no statistical differences for all of the lifestyle characteristics between around or after-menopausal $p > 0.05$ except for driving were $p < 0.05$ however, the difference was very small.

Regarding the perceived health, there was no significant differences $p = 0.74$ among participants, and more than 70% ranged from good to very good for around menopause and 97% for after menopause respectively, and 75 (49.7%) and 33 (21.9%) good and very good for around menopausal and 24 (15.9%), 11 (7.3%) good and very good for after menopause, Table 2.

### 4.3. Menopausal Symptoms

The menopausal symptoms are divided into four domains vasomotor, psychosocial, physical, and sexual for the around and after menopause. The Cronbach's Alpha test derived for the questions was 0.957; Table 3 shows the degree of severity of menopausal symptoms. The 29 question items among both around and after menopause sub-divided into two groups either with or without symptoms. The most frequent symptoms of the four domains for the top five most frequent symptoms were; aching in muscle and joints 119 (78.8%), aches in the back of the neck and head 116 (76.8%) feeling tired or worm out 111 (73.5%), drying of skin 108 (71.5%), and decrease in physical strength 106 (70.2%) in the Physical domain. In addition, the least five symptoms were; an increase in facial hair 48 (31.8%), being dissatisfied with personal life 48 (31.8%), being impatient with others 49 (32.5%), feeling of wanting to be alone 56 (7.1%), and involuntary urination when laughing or coughing 62 (41.1%).

Descriptive statistics of the four MENQOL domains. Results show almost equal symptoms for both groups with no statistical difference.

The overall scores of quality of life of the four domains of around and after menopause status showed that vasomotor and physical domains were mean (SD) 4.67(4.9), 5.31 (5.1) and 31.2 (21), 31.0 (21) respectively, with no statistically significant differences. This is also true for the other two domains psychosocial, sexual 9.9 (10), 9.6(10) and 6.0(5.3), 6.2 (5.1) respectively, in Table 4.

**Table 1.** Characteristics of sociodemographic and perception of health status according to the demographic of the study participants.

| Sociodemographic characteristics of participants | | | | | Perceived health status | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Participant's characteristics | Count | (%) | Around menopause | After menopause | Not good | Good | Very good | Total | P-value For a response of perceived health status |
| | 151 | 100 | N (%) 115 (76.2) | N (%) 36 (23.8) | Count (%) | | | | |
| ***Age*** | | | | | | | | | |
| 40 - 45 | 34 | 22.5 | 30 (19.1) | 4 (2.6) | 2 (1.3) | 25 (16.6) | 7 (4.6) | 34 (22.5) | 0.32 |
| 46 - 50 | 25 | 16.6 | 23 (15.2) | 2 (1.3) | 3 (2.0) | 16 (10.6) | 6 (4.0) | 25 (16.6) | |
| 51 - 55 | 43 | 28.5 | 35 (23.2) | 8 (5.30 | 0 (0.0) | 27 (17.9) | 16 (10.6) | 43 (28.5) | |
| 56 and above | 49 | 32.5 | 27 (17.9) | 22 (14.6) | 3 (2.0) | 31 (20.5) | 15 (9.9) | 49 (32.5) | |
| ***Marital status*** | | | | | | | | | |
| Single | 5 | 3.3 | 4 (2.6) | 1 (0.8) | 0 (0.0) | 3 (2.0) | 2 (1.3) | 5 (3.3) | 0.92 |
| Married | 126 | 83.4 | 96 (63.6) | 30 (19.9) | 7 (4.6) | 83 (55.0) | 36 (23.8) | 126 (83.4) | |
| Divorced | 11 | 7.3 | 8 (5.3) | 3 (2.0) | 0 (0.0) | 8 (5.3) | 3 (2.0) | 11 (7.3) | |
| Widow | 9 | 6 | 7 (4.6) | 2 (1.3) | 1 (0.7) | 5 (3.3) | 3 (2.0) | 9 (6.0) | |
| ***Number of children*** | | | | | | | | | |
| No children | 20 | 13.2 | 19 (12.6) | 1 (0.7) | 0 (0.0) | 16 (10.6) | 4 (2.6) | 20 (13.2) | 0.29 |
| One to three | 39 | 25.8 | 28 (18.5) | 11 (7.3) | 1 (0.7) | 28 (18.5) | 10 (6.6) | 39 (25.8) | |
| Four and more | 92 | 60.9 | 68 (45.0) | 24 (15.9) | 7 (4.6) | 55 36.4) | 30 (19.9) | 92 (60.9) | |
| ***Income*** | | | | | | | | | |
| Low | 16 | 10.6 | 15 (9.9) | 1 (0.7) | 3 (2.0) | 11 (7.3) | 2 (1.3) | 16 (10.6) | 0.01, Cramer's test 0.25 |
| Moderate | 118 | 78.1 | 89 (58.9) | 29 (19.2) | 5 (3.3) | 82 (54.3) | 31 (20.5) | 118 (78.1) | |
| High | 17 | 11.3 | 11 (7.3) | 6 (4.0) | 0 (0.0) | 6 (4.0) | 11 (7.3) | 17 (11.3) | |
| ***Educational level*** | | | | | | | | | |
| Intermediate | 7 | 4.6 | 7 (4.6) | 0 (0) | 1 (0.7) | 4 (2.6) | 2 (1.3) | 7 (4.6) | 0.27 |
| High school | 22 | 14.6 | 18 (11.9) | 4 (2.6) | 2 (1.3) | 13 (8.6) | 7 (4.6) | 22 (14.6) | |
| Bachelor | 107 | 70.9 | 77 (51.0) | 30 (19.9) | 5 (3.3) | 75 (49.7) | 27 (17.9) | 107 (70.9) | |
| Postgraduate | 15 | 9.9 | 13 (11.3) | 2 (5.6) | 0 (0.0) | 7 (4.6) | 8 (5.3) | 15 (9.9) | |
| ***Occupation*** | | | | | | | | | |
| Do not work | 9 | 6 | 7 (4.6) | 2 (1.3) | 1 (0.7) | 6 (4.0) | 2 (1.3) | 9 (6.0) | 0.21 |
| Housewife | 31 | 20.5 | 28 (18.5) | 3 (2.0) | 4 (2.6) | 17 (11.3) | 10 (6.6) | 31 (20.5) | |
| Employee | 46 | 30.5 | 38 (33.0) | 8 (22.2) | 1 (0.7) | 35 (23.2) | 10 (6.6) | 46 (30.5) | |
| Retired | 65 | 43 | 42 (27.8) | 23 (15.2) | 2 (1.3) | 41 (27.2) | 22 (14.6) | 65 (43.0) | |

**Table 2.** Perception of health status level according to the around or after the menopausal period.

| | Perceived health status | | | Total | P-value |
|---|---|---|---|---|---|
| | Not good | Good | Very good | | |
| Around menopause | 7 (4.6) | 75 ( 49.7) | 33 (21.9) | 115 (76.2) | |
| After menopausal | 1 (0.7) | 24 (15.9) | 11 (7.3) | 36 (23.8) | 0.74 |
| Total | 8 (5.3) | 99 (65.6) | 44 (29.1) | 151 (100.0) | |

**Table 3.** The four domains of QOL characteristics, Absence/presence symptoms, and around and post-menopausal for the presence of the 29 items, counts, and percentages.

| | | Item | No symptoms N (%) | Total annoyed N (%) | Around menopause N (%) | post menopause N (%) |
|---|---|---|---|---|---|---|
| Q1 | Vasomotor | Hot flushes | 80 (53) | 71 (47) | 52 (34.4) | 19 (12.6) |
| Q2 | | Night sweats | 69 (45.7) | 82 (54.7) | 58 (38.4) | 24 (15.9) |
| Q3 | | Sweating | 69 (45.7) | 82 (54.7) | 59 (39.1) | 23 (15.2) |
| Q4 | Psychosocial | Being dissatisfied with personal life | 103 (68.2) | **48 (31.8)$^{\$}$** | 37 (24.5) | 11 (7.3) |
| Q5 | | Feeling anxious or nervous | 60 (39.7) | 91 (60.3) | 69 (45.7) | 22 (14.6) |
| Q6 | | Experiencing poor memory | 61 (40.4) | 90 (59.6) | 65 (43.0) | 25 (16.6) |
| Q7 | | Accomplishing less than used to | 79 (52.3) | 72 (47.7) | 54 (35.8) | 18 (11.9) |
| Q8 | | Feeling depressed down or bored | 79 (52.3) | 72 (47.7) | 53 (35.1) | 19 (12.6) |
| Q9 | | Being impatient with other people | 102 (67.5) | **49 (32.5)$^{\$}$** | 38 (25.2) | 11 (7.3) |
| Q10 | | Feelings of wanting to be alone | 95 (62.9) | **56 (37.1)$^{\$}$** | 43 (28.5) | 13 (8.6) |
| Q11 | Physical | Gas pain/flatulence | 46 (30.5) | 105 (69.5) | 84 (55.6) | 21 (13.9) |
| Q12 | | Aching in muscles and joints | 32 (21.2) | **119 (78.8)*** | 89 (58.9) | 30 (19.9) |
| Q13 | | Feeling tired or worn out | 40 (26.5) | **111 (73.5)*** | 86 (57.0) | 25 (16.6) |
| Q14 | | Difficulty sleeping | 59 (39.1) | 92 (60.9) | 66 (43.7) | 26 (17.2) |
| Q15 | | Aches in the back of the neck and head | 35 (23.2) | **116 (76.8)*** | 86 (57.0) | 30 (19.9) |
| Q16 | | Decrease in physical strength | 45 (29.8) | **106 (70.2)*** | 83 (55.0) | 23 (15.2) |
| Q17 | | Decrease in stamina | 62 (41.1) | 89 (58.9) | 70 (46.4) | 19 (12.6) |
| Q18 | | Feeling a lack of energy | 47 (31.1) | 104 (68.9) | 76 (50.3) | 28 (18.5) |
| Q19 | | Drying of skin | 43 (28.5) | 108 (71.5) | 80 (53.0) | 28 (18.5) |
| Q20 | | Weight gain | 62 (41.1) | 89 (58.9) | 67 (44.4) | 22 (14.6) |
| Q21 | | Increased facial hair | 103 (68.2) | **48 (31.8)$^{\$}$** | 33 (21.9) | 15 (9.9) |
| Q22 | | Changes in appearance, texture, or tone of | 70 (46.4) | 81 (53.6) | 58 (38.4) | 23 (15.2) |
| Q23 | | A feeling of stomach gas | 69 (45.7) | 82 (54.3) | 66 (43.7) | 16 (10.6) |
| Q24 | | Low backache | 54 (35.8) | 97 (64.2) | 76 (50.3) | 21 (13.9) |
| Q25 | | Increase urination | 76 (50.3) | **75 (49.7)$^{\$}$** | 54 (35.8) | 21 (13.9) |
| Q26 | | Involuntary urination when laughing or coughing | 89 (58.9) | **62 (41.1)$^{\$}$** | 43 (28.5) | 19 (12.6) |

**Continued**

| | | | | | | |
|---|---|---|---|---|---|---|
| Q27 | | Change in sexual desire | 55 (36.4) | 96 (63.6) | 71 (47.0) | 25 (16.6) |
| Q28 | Sexual | Vaginal dryness during intercourse | 62 (41.1) | 89 (58.9) | 67 (44.4) | 22 (14.6) |
| Q29 | | Avoiding intimacy | 65 (43.0) | 86 (57.0) | 65 (43.0) | 21 (57.0) |

*Indicate top four symptoms, $Indicate least four symptoms.

**Table 4.** Differences in the symptoms of the four domains between the around and after menopausal count and percentage.

| Domain | Score range | Around menopause Mean (SD) 95% CI | After menopause Mean (SD) 95% CI | MENQOL Mean (SD) | P-value |
|---|---|---|---|---|---|
| Vasomotor | 1 - 15 | 4.67 (4.9) (3.75, 5.75) | 5.31 (5.1) (3.57, 7.0) | 4.82 (5.0) | 0.51 |
| Physical | 1 - 75 | 31.2 (21) (27.3, 35.1) | 31.0 (21) (23.8, 38.3) | 31.17 (21.2) | 0.97 |
| Psychosocial | 1 - 35 | 9.9 (10) (8.1, 11.8) | 9.6 (10) (6.2, 13.1) | 9.88 (10.1) | 0.87 |
| Sexual | 1 - 15 | 6.0 (5.3) (5.0, 7.0) | 6.2 (5.1) (4.5, 8.0) | 6.05 (5.3) | 0.77 |
| All domains | | 12.9 (9.0) (11.2, 14.6) | 13 (8.6) (11.5, 14.4) | 12.9 (8.9) | 0.50 |

**Table 5.** Correlation among the four domains with each other, *Spearman's correlation is significant at the 0.01 level (2-tailed).

| Domain | Vasomotor | Physical | Psychosocial | Sexual |
|---|---|---|---|---|
| Vasomotor | 1.000 | | | |
| Physical | 0.419* | 1.000 | | |
| Psychosocial | 0.507* | 0.64* | 1.000 | |
| Sexual | 0.429* | 0.584* | 0.488* | 1.000 |

*Spearman's correlation is significant at the 0.01 level (2-tailed).

The correlation among the four domains was moderate in Table 5. Note: Lower score means better QOL, no statistically significant difference was found for the four domains and the status of menopause.

There was a moderate correlation (r) among the four domains with each other ranging between 0.419 - 0.65. There is also no statistical significance difference among either demographic characteristics or lifestyle with perceived health status, Table 5.

## 5. Discussion

The transitional period (menopause) in women occurs at age around 50 years, when women may or may not suffer from the reduced quality of life symptoms that depend on the different environment and personal factors, which it thought to be related to several factors *i.e.* socio-demographical, genetics and personal perception. To maintain the optimal level of QOL, understanding this transitional period and/or discussing them with the nearby personnel, especially health providers and family, and evaluating them to decrease the impact of the symptoms is thought to be the key point.

The QOL may be determined by the place of living where cities and developed

areas are having better QOL and enjoyed better life, the area of the participants were from metropolitan areas and at a level of very good development [14] [15], therefore the result is somewhat expected to be not at high risk of anxiety or depression [16] [17]. Women living in metropolitan areas may have good opportunities to interact with more cultural and economic activities than those who are living in rural area.

The high positive perception found in the current study of more than 70% for around and 97% for after menopause is similar to others in the region [11] Saudi Arabia, [17] UAE, and Pakistan [18] that thought to be affected with the level of knowledge [19] [20] as it is in this study was more than 80% of participants were holding bachelor or higher degree, rather than some studies their participants were housewives or not working [11]. Women living in the city have more opportunities to be involved in social, cultural, or economic activities. In contrast, women in rural areas are more labile to diminished self-esteem at the end of their childbearing age. In the presented study, permanent rural dwellers were characterized by the lowest level of education. The influence of low educational levels on symptoms at menopause, which affects women's quality of life, has been shown in previous studies [21].

Some of the objectives of the current study to evaluate and subdivide the symptoms of menopause into the four domains of QOL [4], due to rare documentation and to increase women's awareness, and to reduce the bothersome of QOL and the interaction with the surrounding environment.

Physical domain was the highest symptoms were reported, aching at 78.8%, aches in the back of the neck and head at 76.8%, feeling tired or warm out at 73.5%, and a decrease in physical strength at 70.2% whereas, the lowest was in the psychosocial domain. Another study in Saudi Arabia found that Flatulence (wind) or gas pains, difficulty sleeping, and increased facial hair are the most common physical symptoms with a percentage of around 68% [22]. This is similar to what was found in the study [23] of increased symptoms of aching of muscles and joints as well as feeling tired and warm out. The order of menopausal symptoms level found in this study for the other three domains was vasomotor, psychological, and sexual domains with some variation of the frequency of percentage [22] [24], with a mild variation of the QOL order [25].

Even though this study found a high level of vasomotor symptoms such as hot flushes and night sweating, the variation could be due to the personality differences understanding of the exact meaning of questions.

## 6. Educational Level and Occupation and Severity Level

The increased level of education of 111 (73.5%) of either employee or retired beside the increased level of education 122 (80.8%) [22] may play an important role in equalizing between the two groups around and after the menopausal period, and also the lack of education may negatively impact the after-menopausal level in families and societies [16].

The increased improvement of lifestyle (sport, driving, personal perception, etc.) may also be added to the improvement of perception. The reduced severity and thereafter the impact of symptoms in the past were not well identified such as being dissatisfied with self-personal of life and feeling to staying alone and being impatient with others may also add to the result, but this may be contraindicated in another study [26].

There was a popular myth around states that car driving may affect the personal health of women or may have some effect on the symptoms of a ministerial cycle, we tried to test this and see if any differences could be found however. No differences were found among women who drive and those who do not drive; this is included to satisfy their interest.

## 7. Overall

Even though the participating women faced the same symptoms, however, groups of either around or after menopause had almost equal finding and no statistical differences found, and even though no relationship was found among the demographic characteristics, lifestyle, and menopausal characteristics. However, this indicates that the cross-sectional woman participated in this study were having a good understanding of the symptoms that they may face during this period and they could manage their life accordingly.

## 8. Conclusion

The current study tried to evaluate the four domains of QOL and show the most and the least four symptoms, mild differences were found among the small number of participants during the around and after-menopause transitional period for the four QOL domains.

## Good Words

The Increased educational level among both health care professionals and women may play a visible role in the result even though it was not statistically found but the perceived health status could be the answer. Further investigations of the QOL level in the region are recommended.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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