

Association between Menopausal Symptoms and Quality of Life among Working Women

Rasha Mohamed Essa⁽¹⁾ Sanaa Mohamed Mohamed⁽²⁾, Violet Nicola Ghattas⁽³⁾,
Tahany Hassan Alam⁽⁴⁾

⁽¹⁾ Professor in Obstetrics and Gynecologic Nursing, Faculty of Nursing, Damnhour University, Egypt

⁽²⁾ Dementrator in Obstetrics and Gynecologic Nursing, Faculty of Nursing, Damnhour University, Egypt

⁽³⁾ Assistant Professor in Obstetrics and Gynecologic Nursing, Faculty of Nursing, Damnhour University, Egypt

⁽⁴⁾ Assistant Professor in Obstetrics and Gynecologic Nursing department, Faculty of Nursing, Damnhour University, Egypt

DOI: <https://doi.org/10.5281/zenodo.13221452>

Published Date: 05-August-2024

Abstract: **Background:** Menopause is a significant milestone in women's lives that results from the depletion of ovarian function and leads to a new biological state. During menopausal period women can experience many symptoms. The menopausal symptoms and associated biological changes have a negative impact on the general health and quality of life (QOL) as well as the wellbeing of middle-aged women **Aim:** To assess the association between menopausal symptoms and quality of life among working women. **Design:** A descriptive correlational research design was utilized to conduct this study. **Setting:** This study was conducted at 12 faculties at Damanhour University. In addition to the University's general administration. **Subjects:** convenience sample of 250 menopausal working women enrolled from academic staff members and from administrative workers from all departments of Damanhour university who were available during the time of data collection. **Tools:** Three tools were used to obtain the necessary data for this study. **Tool (1):** "A structured interview schedule". Which included, three parts: **Part I:** Basic demographic data, **Part II:** Medical history, **Part III:** Reproductive history. **Tool (2):** "Menopause Rating Scale (MRS) questionnaire: " and **Tool (3):** "World Health Organization Quality of Life Questionnaire (WHOQOL BRIEF)". **Results:** The results of this study revealed that more than half of the studied menopausal women (52%) had reported moderate symptoms compared to less than one third (31.2%) had reported severe problems. Regarding quality of life, there was a highly statistically significant correlation between menopausal symptoms and quality of life at ($p \leq 0.001$). **Conclusion:** The findings of this study concluded that, The QOL of menopausal working women is negatively affected by their menopausal symptoms. **Recommendations:** Implementing appropriate health education programs for women about menopause to understand the physiological changes associated with menopause and how to adapt to the new physiological status and avoid adverse effects on their psychological health.

Keywords: Menopause, Menopausal symptoms, (QOL) Quality of life, working women.

1. INTRODUCTION

Today, with increased life expectancy and a longer life span, women spend one-third of their lives beyond menopause. Menopause is a natural physiological process and a period of major physical and emotional changes in every woman's life. The onset of this physiological development not only marks the end of women's reproductive function but also

International Journal of Novel Research in Healthcare and NursingVol. 11, Issue 2, pp: (227-242), Month: May - August 2024, Available at: www.noveltyjournals.com

introduces a new phase of life. (Dalal & Agarwal, 2015; Samarasiri et al., 2017) Menopausal symptoms appear throughout the menopausal transition they persist as long as 10 years before the last menstrual period and also persist in the postmenopausal period with varying duration, prevalence, and severity. Talaulikar (2022) It includes all of the following symptoms: vasomotor, Psychological and urogenital. Vasomotor symptoms (VMS) are a collective term refers to (hot flushes, flashes and night sweating) that is described by women as an intense sensation of heat that rises through the upper body and face and is strongly associated with poor sleep and insomnia. Psychological symptoms such as mood disturbances, anxiety and depressive symptoms. Additionally, urogenital symptoms such as vaginal dryness, itching, dysuria, dyspareunia, urgency and recurrent urinary tract infections (UTIs) are also reported by perimenopausal and postmenopausal women. Palacios (2021)

Menopause is a transitional process experienced by over 500 million women between the ages of 45 and 55 each year worldwide. This number is expected to increase to 1200 million women by the year 2030. Globally the mean age of natural menopause is 48.8 years. Among Egyptian women, the mean age of menopause was estimated to be 46.7 years. (pany 2018; Smail, Jassim & Shakil, 2020).The postmenopausal symptoms not only affect the women health and wellbeing but also can affect other aspects of their life such as women's behavior, social consequences, psychological and emotional wellbeing. This symptom can be severe enough to interfere with the normal daily life activities of menopausal women which ultimately, affects their quality of life (QOL) Al-Mehaisen & Al-kuran (2018). The World Health Organization (WHO) defines quality of life as "a person's view of their place in life in relation to their objectives, expectations, standards, and concerns in the context of the culture and value systems in which they live. It is a wide notion that is intricately influenced by a person's functional status, social relationships, personal views, and interactions with key elements of their environment. Aqtam, Ayed & Zaben (2023).

The quality of life of a postmenopausal woman is the result of a series of transformations that see in the reduction of sex hormones and steroids. During the climacteric period 80% of women complain about subjective bothersome symptomatology that often negatively impacts the quality of life (QOL) of interpersonal, social and working activities. Giannini et al., (2021). The symptoms connected with poor health-related quality of life could be distressing because they occur when women have important societal roles in the family and workplace. In addition, many women experience the symptoms of menopause, the majority of which are self-limiting, unpleasant and sometimes disabling. As a result, menopausal women's quality of life of is critical and management of menopausal symptoms uplifts the health-related quality of life of menopausal women. (Monteleone et al., 2018; Baral & Kaphle, 2023)

The menopausal symptoms such as irritability, mood changes, and job stress can directly affect work performance, attendance, and overall well-being and lead to difficulties coping at work, compromised ability to work efficiently, lower work productivity, reduced concentration levels, and missed days at work. Bryson et al., (2022) Addressing these symptoms and providing appropriate medical treatment are crucial to improving the quality of life and work outcomes for menopausal women in the workforce. O'Neill, Jones & Reid, (2023)

Maternity health nurses are in the best position by the virtue of their profession to create awareness and sensitize women on menopausal symptoms. Furthermore, nurses and other health care providers have a visible and crucial role in teaching women about the management of menopausal symptoms and addressing their fears and concerns. Olufunke et al., (2023)

Significance of the study

Good health is important for women, working organization and for society. Menopause in relation to work requires serious consideration in both research and policy at all levels. Post-menopausal women are one of the most ignored groups and there is little research conducted on their quality of life. Despite a majority of women experiencing multiple symptoms, the literature still presents a gap on whether clusters of symptoms consistently occur and what these symptoms have on quality of life. Essa & Mahmoud (2018).

Aims of the Study

This study aimed to determine the association between menopausal symptoms and quality of life among working women at Damanhour University.

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Research question

What is the association between menopausal symptoms and quality of life among working women?

2. MATERIALS AND METHOD

Design: A descriptive, correlation research design was utilized to conduct this study.

Setting: This study was conducted at 12 faculties at Damanhour University namely, Faculty of Education for Early Childhood, Faculty of Nursing, Faculty of Sciences, Faculty of Pharmacy, Faculty of Education, Faculty of Agriculture, Faculty of Arts, Faculty of Veterinary Medicine, Faculty of Commerce, Faculty of Specific Education, Faculty of Engineering and Institute for Graduate Studies and Research, . In addition to the University's general administration. Data was collected from both academic staff members and from administrative worker from all departments of Damanhour university directory namely: the accounting department, the secretarial department, the student affairs department, the legal affairs department, the statistics department and the archive department.

Subjects: A convenience sample of 250 working women at menopausal age in the previously mentioned settings. they were selected according to the following inclusion criteria:

- Women who have symptoms of menopause.
- Don't use hormonal replacement therapy.
- Women who have menstruation ceased at least from 6-12 months.
- They were willing to participate in the study.

Tools: The study used three tools for data collection:

Tool I: A structured interview schedule

This tool was developed by the researcher to collect the necessary data about the study subjects. It entailed three parts:

Part I: Basic demographic data such as age, level of education, occupation, family income, crowding index, family type, residence and marital status. **Part II: Medical history** such as cardiovascular diseases, diabetes mellitus, hypertension and pulmonary diseases. **Part III: Reproductive history** such as gravidity and parity history, menstrual history and menopausal history.

Tool II: Menopause Rating Scale (MRS) questionnaire. It was developed by **Heinemann et al., (2004)** for the purpose of assessing menopausal symptoms. It was adopted by the researcher. The MRS is composed of 11 items which are divided into three subscales: **Somatic symptoms:** It included four items (hot flushes, heart problems, sleeping problems and muscle & joint problems) **Psychological symptoms:** It included four items (depression, irritability, anxiety and physical & mental exhaustion) **Urogenital symptoms:** It included three items (sexual problems, bladder problems and dryness of the vagina). The responses of the menopausal women were measured on a 5-point Likert rating scale ranging from (0-4) and include: (0) none, (1) mild, (2) moderate, (3) severe, (4) very severe. The overall score level ranged from (0 to 44) and was categorized as follows: No problems (0<2), mild problems (2<11), moderate problems (11<22), severe problems (11<42), very severe problems (42-44).

Tool III: World Health Organization Quality of life Questionnaire (WHOQOL BRIEF) it was developed by **Khan et al., (2003)** and it was adapted by the researcher. The WHOQOL-BRIEF consisted of 26 standard items. It includes two general items (1and 2) which asking about overall QOL and general health, and the remaining 24 items were classified into 4 domains: **Physical domain:** It had (7-items) about the woman's perception regarding her physical condition.

Psychological domain: It had (6- items) about the woman's perception regarding her affective and cognitive condition.

Social relationships: It had (3-items) about the woman's perception regarding social relations and social roles adopted in her life. **Environmental domain:** It had (8-items) about the woman's perception regarding diverse aspects related to the environment in which she lives. These facets were scored using 5-point Likert Scale which ranged from (1to 5). It were scored and classified according the meaning of each question either: (1= very poor, 2= poor, 3= neither poor or good, 4=

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good and 5= very good); **or** (1=very satisfied, 2= dissatisfied, 3= neither dissatisfied or satisfied, 4= satisfied and 5= very satisfied); **or** (1= not at all, 2= a little, 3= a moderate amount, 4= very much and 5= extremely); **or** (1= never, 2= seldom, 3= quite often, 4= very often and 5= always). The negative items had reversed score. Thus, the total score ranged from 26 (The worst possible QOL) to 130 (The best possible QOL). The Scoring system was modified by the researchers and classified according to the following degrees: Poor quality of life: (26 < 52), Fair quality of life: (52 < 78), Good quality of life: (78 < 104), Excellent quality of life: (104 - 130).

Method

1. An official permission was obtained from the Dean of the Faculty of Nursing, Damanhour University to ask the responsible authorities of the previously mentioned setting for permission to collect data after explaining the purpose of the study.
2. An official letter from the president of Damanhour University was directed to Deans of colleges at the university to facilitate the implementation of the study via the researcher.
3. Tool I was developed by the researchers after reviewing the related literature.
4. Tool II was adopted and tool III was adapted and two tools were translated into Arabic language version.
5. **Validity** of Tool I, II and tool III were tested for its content by a panel of five experts in the related fields of the Obstetric and Gynecologic Nursing and Community Health Nursing. Accordingly, the necessary modifications were done.
6. Reliability of the Tools were checked by cronbach's alpha coefficient test and the result was reliable, it was (0. 848) for tool II and (0. 932) for tool III, which indicated an accepted reliability of the tools.
7. A pilot study was carried out on 10% of the total study subject (n=36) of menopausal women who were excluded from the main study subject. To check the feasibility of the study as well as to ascertain the clarity, feasibility and applicability of the tools and to identify obstacles that might interfere with the process of data collection. After conducting the pilot study, it was found that the sentences of the tools were clear and relevant; no modifications were done.

Data collection:

- The data was collected individually through interviewing technique by the researcher in total privacy in the selected setting using tool I,II and III after brief explanation of the purpose of the study and obtained their oral consent.
- The structured interview time took approximately 20- 30 minutes for each women, three days per week (from 8:30 am to 2:00 pm) were specified for data collection over a period of six months, started from the beginning of February 2023 till the beginning of August 2023, An average of 4 to 5 interviews was performed per day.

Ethical considerations:

- The research approval was obtained from the ethical committee at the Faculty of Nursing- Damanhour University prior to the start of the study.
- permission was obtained to collect the data from the previous setting
- Informed oral consent obtained from every woman for her participation in the study after explaining the aim of the study; her voluntary participation and the right to withdraw from the study at any time.
- Anonymity of the study participant considered.
- Anonymity of the study participant considered.
- Confidentiality of the collected data maintained.

International Journal of Novel Research in Healthcare and NursingVol. 11, Issue 2, pp: (227-242), Month: May - August 2024, Available at: www.noveltyjournals.com**Statistical Analysis:**

After data collection, the collected data were coded, computerized, tabulated and analyzed. Data were fed to the computer and analyzed using IBM SPSS software package version 23.0. Pearson coefficient was used to correlate between normally distributed quantitative variables were assessed using Chi-square test (Monte Carlo). Descriptive statistics was used to calculate percentages, frequencies, Mean and standard deviations, Quality of life scale significance of the obtained results was judged at the 5% level. A significant P value will be considered when P less than 0.05 and it will be considered highly significant when P value less than or equal 0.01.

3. RESULTS

Table 1 Displays the distribution of the studied subjects according to their demographic characteristics. Concerning age this table illustrates that the age of the studied subjects ranged from less than 50 to more than 60 years with a mean of 53.45 ± 3.69 years. It can be observed that slightly more than one third (34%) of the studied menopausal women their age was ranged from 50- < 55 years and the same proportion was considered for the age from 55- \leq 60 years old and only (12.4%) of them were more than 60 years. Pertaining to education, it was founded that nearly less than one half (47.2%) of the studied menopausal women had university education while more than one-fifth of the studied menopausal women (21.6%) had secondary education. The minority (13.6%) of them had basic education either primary or preparatory. As regard occupation it was found that more than one third of them (33.6&35.2) had academic work and had administrative work respectively. Considering residence, the table reveals also more than three-fifth (62.8%) of them were rural residences. Regarding marital status of the studied menopausal women, slightly less than three quarter (74.8%) of them were married on the other hand the minority of them (17.6%) were widowed. Additionally, more than two thirds of the studied women (62.8%) belong to a nuclear family.

Table 2 Illustrates the distribution of the studied menopausal women according to their menstrual history it was observed that more than two third (67.2%) of the studied women had age of menarche from 12 to 16 years old, compared to (9.2%) got their menarche more than 16 years. Considering the rhythm of menstruation, the majority (80.4%) of the studied menopausal women had regular menstruation, while only one fifth (19.6%) had irregular menstruation. Concerning the amount of menstrual flow, it was observed that less than three quarters (74.4%) had a moderate amount on the other hand only (10%) had scanty amount. When duration of the cycle is considered, it was observed that less than two thirds (62.8%) of the studied women had their cycle 5 to 7 days compared to (9.6%) of them had their cycle more than 7 days. Regarding interval of menstruation, it was founded that less than two thirds (64.4%) of them had their menstrual interval from 22 to 35 days, while (6.8%) had their menstrual interval more than 35 days. Concerning the age of menopause, the table shows that more than three quarter (77.6 %) of the studied menopausal women had their menstruation cease at the age from 45 to more than 50 years while the minority (6%) of them had their menstruation ceased at the age of 35 to less than 40 years with the mean of 47.70 ± 3.32 years. Most of the studied women (90%) had natural menopause compared to only (10%) had artificial menopause.

Table 3 The table presents the distribution of the studied women according to (MRS). The highest mean score was related to somatic symptoms (7.49 ± 3.30), followed by psychological symptoms (6.93 ± 3.65) then urogenital symptoms (3.21 ± 2.43). Regarding somatic symptoms it was clear that two fifth (40%) of the studied menopausal women had reported very severe symptoms for joint and muscular discomfort, compared to more than one third of the studied menopausal women (36.4%) had reported very severe symptoms for sleep problems, only (4.4%) had reported moderate symptoms for sleep problems. Pertaining to Psychological symptoms it was found that nearly one third of the studied menopausal women (33.2%) of them had reported severe symptoms for anxiety, while the minority of them (2%) had very severe symptoms for anxiety. In relation to urogenital symptoms, it was obvious that less than half of the studied menopausal women (46%) of them had reported mild symptoms for dryness of the vagina, while the minority of them (0.8%) had very severe symptoms for sexual problems.

Figure (1) shows the distribution of the studied menopausal women according to the severity of menopausal symptoms. It was clear that more than half of the studied menopausal women (52%) had reported moderate symptoms compared to less than one third (31.2%) of them had reported severe problems. Only (15.6%) of them had reported mild symptoms. However, the mean and SD of the severity of menopausal symptoms was (17.63 ± 7.67).

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Figure (2) this figure shows the distribution of the studied subject according to the overall World Health Organization Quality of life Questionnaire it was founded that more than one half of the studied menopausal women (50.4%) of them had poor quality of life, moreover less than half (44.8%) of them had fair quality of life, While the minority of them (1.6% & 3.2%) had excellent quality of life and good quality of life respectively. However, the mean and SD of the overall World Health Organization Quality of life Questionnaire were (76.33 ± 12.59) .

Table (4) this table clarifies the relationship between severity of menopausal symptoms and degree of quality of life it revealed that less than two thirds (65.4%) of the studied menopausal women who had severe symptoms had poor quality of life. In addition to more than half (52.3%) of menopausal women who had moderate problem had poor quality of life, on the other hand more than three quarters (76.9%) of menopausal women who had mild problems had fair quality of life. There was a highly statistically significant difference between menopausal symptoms and quality of life where $p=0.001$.

Table (5) This table illustrate the correlation between various domains of the Menopausal Rating Scale (MRS) and the World Health Organization Quality of Life (WHOQOL) questionnaire. The negative correlations suggest that as the scores on the MRS domains (somatic, psychological, urogenital symptoms, and overall scale) increase (indicating more severe symptoms), the scores on the corresponding domains of WHOQOL (physical, psychological, social relationships, environmental, and overall) tend to decrease, reflecting a lower quality of life during menopause. The highly statistically significant correlations at $p \leq 0.001$ indicate meaningful associations between these measures, indicating a relationship between menopausal symptoms and quality of life.

4. DISCUSSION

Menopause is considered an important experience that changes a woman's life in different aspects. Menopause has emerged as a prominent issue in woman's health. This natural phenomenon often results in various psychological, somatic, vasomotor, and urinary symptoms, which may impair the women's overall quality of life of. **PILLAY (2023)**. Quality of life is a vital measure for health care; also, identifying the menopausal effect on quality of life is a critical point of care for symptomatic menopausal women. So, the study of QOL in menopausal women became a necessary component in clinical practices as well as a vital social and medical issue. **Terzic et al., (2024)**

The current study result revealed that the mean age of the participants was 53.45 ± 3.69 years. This study's result agrees with the results of two other studies. Firstly; a study conducted by **Uslu-Sahan et al., (2023)** who stated that the mean age of participants was 52.74 ± 5.08 . Secondly; a study conducted by **Anitha, & Sriandaal (2022)**. Who showed that the mean age of the study participants was 52.3 years. Conversely, the study disagreed with **El Hajj et al., (2020)** who reported that the mean age of their participants was 49.53 ± 5.74 years old. The difference in the mean age of participants in these studies might be attributed to the differences in their design, sampling size and study setting where women were included.

The study revealed that nearly less than half of the studied menopausal women had university education and the minority of them had basic education either primary or preparatory. The study results are in the same line with the descriptive study in Makkah Al Mukkaramah carried out by **Mohamed et al., (2014)** Who reported that, more than half of the women had university education. On the other hand the results of this study are inconsistent with the result of **Baral & Kaphle (2023)** who stated that more than one-third of the participants were illiterate, followed by non-formal education, primary education secondary education, and the minority had higher education. This difference may be due to a difference in study settings or geographical location.

According to the study results, more than one third of the studied menopausal women had academic work and had administrative work respectively. The result of this study is similar to the study conducted by **O'Neill, Jones & Reid (2023)** who revealed that more than one third of studied menopausal women had management and administrative role in the area of work included. On the other hand this study result disagrees with the study conducted by **Kang, Kaur & Dhiman (2021)** who reported that the majority of the women were homemakers. The high proportion of women in academic and administrative roles could indicate that these types of occupations may present unique challenges or stressors for women navigating menopause.

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The current study found that more than three-fifths of the studied menopausal women had rural residences and slightly less than three quarters of them were married. This study result was in line with the study conducted by **Ibrahim et al., (2020)** as showed that more than three-fifths of them were living in rural regions and about more than three quarters of them were married.

The study revealed that two third of the studied menopausal women had enough family income this may reflect that women with income satisfaction have access to health services and follow up on health preventive measures as well as a better sense of high self-esteem and empowerment **Namazi, Sadeghi & Behboodi Moghadam (2019)**. This study is in line with the study conducted by **Ramyashree, Veigas & Kanagal (2024)** as reported that two third of the studied menopausal women had enough family income. On the other hand, this study is incongruent with the study conducted by **Elsherbeny NAH et al., (2022)** as reported that more than two third of them didn't have enough monthly income. The variation in sampling size and research method that the researchers used may be the source of the socioeconomic status disparity among the study population.

The current study announced that more than two third of the studied women had menarche from 12 to 16 years old, compared to the minority who got their menarche more than 16 years. This finding is in line with the study conducted by **Elsherbeny, Mohasib & Alla (2022)** who reported that most women's age of menarche ranged between 10 to 14 years old. Also, this finding agrees with **Shrestha & Thapa (2018)** they stated that more than half of women's age of menarche ranged from 13-14 years, in the study entitled "Quality of life after the menopause among working women in Kathmandu Valley"

The current study illustrated that more than three quarter of the studied menopausal women had their menstruation cease at the age from 45 to more than 50 years, with the mean of menopause being 47.70 ± 3.32 years which is considered the mean age of menopause among Egyptian women. Hence medical instances are incapable of predicting the exact timing of menopause, since this transition is a gradual process and is influenced by genetic, cultural and individual profiles. Several studies have specified a range of 45 to 55 years. (**Prasad, Tyagi & Verma 2021; Davis et al., 2023**)

The result of this study is consistent with **Prasad Tyagi & Verma (2021)** who reported that the average age at menopause in India, is 46.6 years which is significantly lower than the age in some developed countries. Conversely, the study disagreed with **Soliman & El-Zeftawy (2021)** who reported that the mean age of the menopausal women was 50.19 ± 3.027 years. The direct cause of these discrepancies concerning the beginning of the menopausal process in women from different countries is hard to interpret. Methodological aspects combined with the ethnic and genetic diversity of humans around the world, as well as some memory bias regarding the exact age of menopause, are most probably the main factors in this divergence.

On discussing menopausal symptoms at different subscales the current study found that the highest mean score was related to somatic symptoms (7.49 ± 3.30), followed by psychological symptoms (6.93 ± 3.65) and urogenital symptoms (3.21 ± 2.43).

The study result is in accordance with the study conducted by **Abo Ali and Oka (2021)** they revealed that the first rank was for somatic symptoms (1.96 ± 0.55) followed by psychological symptoms (1.45 ± 0.63), and urogenital symptoms (1.44 ± 0.70), respectively. Moreover, this study finding completely agrees with a descriptive study conducted by **Mehaseb et al., (2018)** who stated that women experienced a higher prevalence of physical problems and psychological problems than urogenital problems. This agreement between the results of these studies may be attributed to the fact that both used the same scale (MRS) and collected their data from nearly equal numbers of study subjects.

Conversely, the study was contrary to the study result conducted by **Abdel-Salam et al., (2021)** who showed that the severity of the psychological symptoms was the highest among the three studied domains. The mean scores of the subscales were: 6.04 ± 2.89 for the psychological domain, 5.56 ± 2.78 for the somatic domain, and 4.08 ± 2.32 for the urogenital domain. This difference can be explained by the different ways of perceiving these symptoms between different countries in addition to the use of different types of scoring.

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Physical and somatic symptoms might be related to age, as well as to menopausal hormone changes. As humans (men and women) grow older, they suffer more fatigue and muscle pain so hormonal change is probably not the only factor responsible for these symptoms. In this study it was clear that two fifth of the studied menopausal women had reported very severe symptoms of joint and muscular discomfort. The result of this study is supported by a previous study conducted by **Baral & Kaphle (2023)** who reported that the most frequently experienced symptoms of the MRS were joint and muscular discomfort. Also, this study is in line with a study conducted by **Kamal and Seedhom (2017)** in rural Minia, Egypt as they reported that the most reported symptoms were joint and muscle pain.

According to relevant literature a lack of estrogen leads to multiple musculoskeletal changes including osteoporosis, sarcopenia and muscle weakness that may result in muscle and joint pain. Moreover, joint and muscular discomfort may happen due to the deficiency of a balanced diet and calcium-rich foods in the diet.

On the other hand, this study is contradicted with the study result conducted by **Huang et al., (2020)** who revealed that the most frequent symptoms in menopausal women were hot flashes followed by insomnia and fatigue. This variation of the result is not too surprising because every woman passes through the period of menopause and the experience of each individual is unique. Additionally, this difference might happen due to genetic or socio-cultural diversity and differences in diet, especially the consumption of phytoestrogen foods. However, the cultural differences in perception of bother, coping mechanism and physiological differences may contribute to the differences.

It was found that nearly one third of the studied menopausal women had reported severe symptoms of anxiety. This study is in line with a study conducted by **Kaur N & Kaur R (2020)** who illustrated that the most frequently reported symptoms in the psychosocial domain, by Indian women were feeling anxious or nervous followed by feeling depressed.

According to relevant literature it has been suggested that changes in hormonal levels during the menopausal transition might influence the brain through hypothalamic and hippocampal function. Steroid hormones affect serotonin which along with fluctuating neuronal opioids during menopause has been associated with irritability, anxiety and depression. **Herson & Kulkarni (2022)**

On the other hand, this study result isn't in the same line as the study conducted by **Kalhan et al., (2020)** who reported that most of the study subjects had physical and mental exhaustion followed by anxiety.

The type of menopausal symptoms that are reported might be affected by the racial/ethnic background of the women, as well as by menopausal studies comparing women living in different countries. Moreover, the wide variation observed by different researchers, may be associated with variations in methodologies or the social stigma associated with mental disorders.

Genitourinary syndrome of menopause (GSM) is a highly prevalent and progressive condition in postmenopausal women that has significant negative effects on vulvovaginal health, sexual health, and overall quality of life. **Spadt & Larkin (2021)**. In the current study it was obvious that less than half of the studied menopausal women reported mild symptoms of dryness of the vagina. This study result in the same line with a study conducted by **Nosarti Hadiab et al., (2023)** who revealed that the most common symptoms reported by the women were vaginal dryness during sexual intercourse.

Also, the present study highlighted that a minority of the studied menopausal women had very severe symptoms of sexual problems. These findings can be explained by the fact that women in this study suffer from a loss of interest in sexual relation because they become involved in taking care of their grandchildren, performing religious activities like praying and getting overburdened by family responsibility. Sex and sexuality are considered a private issue and a taboo in many cultures, including the Arabic one. Women do not discuss it openly with others, not only because it is a shameful thing, but also because women do not have enough knowledge of sexuality and their sexual rights.

On the opposite side, the study contradicts the study result conducted by **Abdel-Salam et al., (2021)** who showed that the most severe/very severe symptoms of the urogenital domain were sexual problems and bladder problems. However, the prevalence of sexual symptoms at the menopause differs across studies depending on several factors such as sample size, design, hormonal status and social differences in different societies. These differences can result from the variation of individual responses to menopause and estrogen deficiency due to genetics, lifestyle, socioeconomic, and education.

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The finding of the current study revealed that more than half of the studied menopausal women reported moderate symptoms compared to more than one third of them reported severe problems (**Figure 1**). This corresponds well with the study conducted by **Mide-Atolani (2023)** who presented that about the average degree of the respondents had moderate menopausal symptoms, while just a few had severe symptoms. Additionally, the study result was in the same line with the result conducted by **Aid, Gamal & Saad (2019)** which illustrated that more than half of the studied women experienced a moderate level of menopausal symptoms while nearly half of the studied women had an average level of quality of life. Conversely the study result is not in line with **Ramyashree, Veigas & Kanagal (2024)** as reported, that one-quarter of the subjects had severe symptoms and less than one third of women had moderate symptoms. These differences of symptoms are likely due to cultural norms, undetermined biological and lifestyle factors.

According to the majority of studies conducted worldwide, perimenopause is the worst period affecting negatively the QOL of women. The reason behind is the instability of female hormones, especially estrogen, that exacerbates vasomotor manifestations, can lead to many complications in women; besides, peri-menopausal women are psychologically more vulnerable to face this transition in their life. **Golzareh et al., (2017)**

In the current study it was found that more than one half of the studied menopausal women had poor quality of life, moreover less than half of them had fair quality of life. (**Figure 2**). A similar finding was found in a study conducted by **Baral & Kaphle (2023)** who reported that around half of menopausal women have a poor quality of life. However, contrasting findings were obtained in studies from India conducted by **Kalhan et al., (2020)** where more than two thirds of menopausal women had poor quality of life. This variation in results can be attributed to the cultural, socio-economic, geographical, and methodological differences also due to different categorization of symptoms, different study area and use of different study tool to assess QOL.

The result of the current study showed that there is a statistically significant difference between severity of menopausal symptoms and quality of life as the study revealed that less than two thirds of the studied menopausal women who had severe symptoms had poor quality of life.

The findings of this study correspond well with findings in another study conducted by **Kalhan et al., (2020)** as it was announced that QOL was poor in more than two thirds of study subjects with severe symptoms. Also, this study is supported by another study conducted by **Larroy et al., (2020)** who show that in general, the stronger the symptomatology, the worse the QoL.

On the other hand, this study isn't in the same line with the study conducted by **Soliman & El-Zeftawy (2021)** as they found that the majority of the studied menopausal women who had mild menopausal problems had a good quality of life. And more than half of them had either moderate or severe menopausal problems respectively and had a fair quality of life. While **Calvo-Pérez and Campillo-Artero (2013)** revealed that a weak association was detected between being menopausal and QoL.

The current study illustrated a negative correlation between various domains of the Menopausal Rating Scale (MRS) and the World Health Organization Quality of Life (WHOQOL) questionnaire. (**Table 5**) The highly statistically significant correlations at $p \leq 0.001$ indicate meaningful associations between these measures. The study finding corroborates the results of the study conducted by **Mide-Atolani (2023)** as illustrated a significant relationship between menopausal symptoms and quality of life ($r = 0.295$; $p=0.036 < 0.05$). Also the study result is supported by Korean study entitled "factors influencing quality of life in post- menopausal women" conducted by **Shin & Lee (2020)** it revealed that quality of life at all domains had a significant negative correlation with menopausal symptoms ($r=-.40$, $p<.001$).

5. CONCLUSION

The finding of this study concluded that the quality of life of menopausal working women is affected by their menopausal symptoms where a negative highly significant correlation was found between the total score of menopausal rating scale of the studied menopausal working women and the total score of their QOL. In addition, more than half of the menopausal working women had poor quality of life.

6. RECOMMENDATIONS

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

- Enhance the awareness of menopausal women regarding issues of menopausal symptoms. Self-care guidelines should be used in health care centers as routine care for perimenopausal women.
- Implementing appropriate health education programs for women about menopause to understand the physiological changes associated with menopause and how to adapt to the new physiological status and avoid adverse effects on their psychological health.
- A continuing educational program should be developed by a simple booklet to teach and train nurses about the menopausal changes, information about the available services and facilities as well as some positive lifestyle activities.

Recommendations for future research

- Further research is needed to better understand the nuances of how occupation and menopausal experiences intersect, as well as to identify effective interventions and support systems that can be implemented in various workplace settings.
- Further studies on the impact of educational interventions, yoga, meditation and lifestyle modification are necessary to better the QOL of postmenopausal women.
- Further studies are needed to identify the different traditional methods used to overcome menopausal symptoms in Egypt.

Table (1): Distribution of the studied subject according to demographic characteristics (n=250).

Demographic characteristics	(n=250)	
	No	%
Age in years		
• Less than 50	49	19.6
• 50 to less than 55	85	34.0
• 55 to less than 60	85	34.0
• More than 60	31	12.4
Mean ± SD	53.45 ± 3.69	
Education		
• Illiterate or read and write	44	17.6
• Basic education (Primary& preparatory)	34	13.6
• Secondary	54	21.6
• University	118	47.2
Occupation		
• Academic work	84	33.6
• Administrative work	88	35.2
• Other	78	31.2
Residence		
• Rural	157	62.8
• Urban	93	37.2
Family income		
• Not enough	54	21.6
• Enough	149	59.6
• Enough and exceed	47	18.8

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Marital status		
• Single	3	1.2
• Married	187	74.8
• Divorced	16	6.4
• Widow	44	17.6
Family Type		
• Nuclear	157	62.8
• Extended	93	37.2

Table (2): Distribution of the studied subject according to menstrual history (n=250).

Menstrual history	(n=250)	
	No	%
Age of menarche		
• Less than 12 years	59	23.6
• 12 to16 years	168	67.2
• More than 16 years	23	9.2
Menstrual regularity		
• Regular	201	80.4
• Irregular	49	19.6
Amount		
• Scanty	25	10.0
• Moderate	186	74.4
• Excessive	39	15.6
Duration		
• 1- 4 days	69	27.6
• 5 to7 days	157	62.8
• More than 7days	24	9.6
Interval		
• Less than 22 days	72	28.8
• From 22 to 35 days	161	64.4
• More than 35days	17	6.8
Age of menopause		
• 35 to less than 40 years	15	6.0
• 40 to less than 45 years	41	16.4
• 45 to more than 50 years	194	77.6
Mean ± SD	47.70±3.32	
Type of menopause		
• Natural	225	90.0
• Artificial	25	10.0
Cause of artificial menopause		
• Hysterectomy or ovariectomy	21	84.0
• Radiation or chemo-therapy	4	16.0

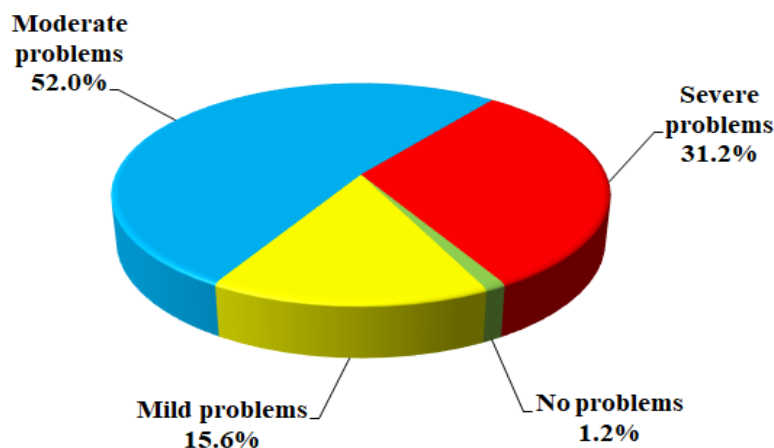
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Table (3): Number and Percent distribution of the study subject according to (MRS) (n=250).

MRS	None		Mild		Moderate		Sever		Very sever	
	No	%	No	%	No	%	No	%	No	%
Somatic symptoms										
▪ Hot flushes, sweating (episodes of sweating)	42	16.8	75	30.0	60	24.0	57	22.8	16	6.4
▪ Heart discomfort (unusual awareness of heart beat, heart skipping, heart racing, tightness)	57	22.8	79	31.6	69	27.6	33	13.2	12	4.8
▪ Sleep problems (difficulty in falling asleep, difficulty in sleeping through, waking up early)	43	17.2	79	31.6	11	4.4	26	10.4	91	36.4
▪ Joint and muscular discomfort (pain in the joints, rheumatoid complaints)	20	8.0	28	11.2	38	15.2	64	25.6	100	40.0
Total score										
Min – Max.	0.0-16.0									
Mean ± SD	7.49±3.30									
Psychological symptoms										
▪ Depressive mood (feeling down, sad, on the verge of tears, lack of drive, mood swings)	40	16.0	61	24.4	74	29.6	61	24.4	14	5.6
▪ Irritability (feeling nervous, inner tension, feeling aggressive)	52	20.8	78	31.2	70	28.0	38	15.2	12	4.8
▪ Anxiety (inner restlessness, feeling panicky)	46	18.4	37	14.8	79	31.6	83	33.2	5	2.0
▪ Physical and mental exhaustion (general decrease in performance, impaired memory, decrease in concentration, forget fullness)	22	8.8	64	25.6	62	24.8	64	25.6	38	15.2
Total score										
Min – Max.	0.00- 16.00									
Mean ± SD	6.93± 3.65									
Urogenital symptoms										
▪ Sexual problems (change in sexual desire, in sexual activity and satisfaction)	93	37.2	94	37.6	41	16.4	20	8.0	2	0.8
▪ Bladder problems (difficulty in urinating, increased need to urinate, bladder incontinence)	75	30.0	94	37.6	48	19.2	23	9.2	10	4.0
▪ Dryness of vagina (sensation of dryness or burning in the vagina, difficulty with sexual intercourse)	75	30.0	115	46.0	41	16.4	14	5.6	5	2.0
Total score										
Min – Max.	0.00- 11.00									
Mean ± SD	3.21± 2.43									

Figure (1): Distribution of the studied menopausal women according to severity of menopausal symptoms.



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Figure (2): Distribution of the studied subject according to overall World Health organization Quality of life Questionnaire (n=250).

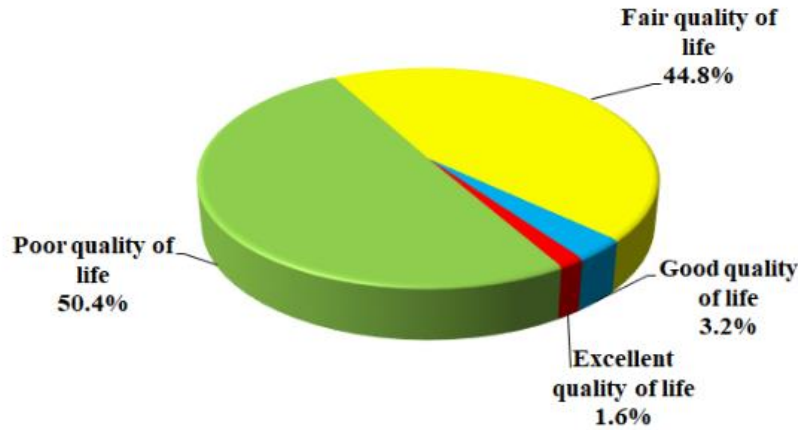


Table (4): Relationship between severity of menopausal symptoms and degree of quality of life (n=250).

World Health Organization Quality of life Questionnaire	Overall Menopause Rating Scale							
	No problems (n=3)		Mild problems (n=39)		Moderate problems (n=130)		Severe problems (n=78)	
	No	%	No	%	No	%	No	%
Poor quality of life	0	0.0%	7	17.9%	68	52.3%	51	65.4%
Fair quality of life	3	100.0%	30	76.9%	56	43.1%	23	29.5%
Good quality of life	0	0.0%	0	0.0%	6	4.6%	2	2.6%
Excellent quality of life	0	0.0%	2	5.1%	0	0.0%	2	2.6%
$\chi^2(MC, p)$	37.828* (<0.001*)							

χ^2 : Chi square test

MC: Monte Carlo

* Statistically significant p-value at ≤ 0.05

Table (5): Correlation between Menopause Rating Scale and WHOQOL.

		Somatic symptoms	Psychological symptoms	Urogenital symptoms	Overall Menopause Rating Scale
Physical domain	r	-0.167*	-0.172*	-0.185*	-0.212*
	p	0.008*	0.006*	0.003*	0.001*
Psychological domain	r	-0.063	-0.093	-0.281*	-0.161*
	p	0.317	0.142	<0.001*	0.011*
Social relationships	r	-0.251*	-0.187*	-0.227*	-0.269*
	p	<0.001*	0.003*	<0.001*	<0.001*
Environmental domain	r	-0.310*	-0.357*	-0.291*	-0.396*
	p	<0.001*	<0.001*	<0.001*	<0.001*
Overall WHOQOL	r	-0.290*	-0.311*	-0.330*	-0.377*
	p	<0.001*	<0.001*	<0.001*	<0.001*

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

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