



## Prevalence of complementary and alternative medicine use and its associated factors among menopausal women in Egypt

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### Abstract:

**Background:** Despite the fact that hormone replacement therapy is beneficial, many women refuse or stop taking it due to negative effects. As a result, many women are turning to complementary and alternative medicine (CAM) seeking safer ways to manage their symptoms and improve their quality of life (CAM). **Aim:** This study was designed to estimate the prevalence of CAM use & its associated factors among menopausal women. Also to compare Quality Of Life between CAM users & non-users. **Subjects and Method: Design:** The researchers utilized a descriptive cross-sectional study design. **Subjects:** The study subjects comprised a sample of 1296 post-menopausal women. **Settings:** This study was conducted at 12 primary healthcare centers affiliated to Port Said Governorate. **Tools:** A survey instrument and Menopause-Specific Quality of Life (MENQOL) questionnaire were used. **Results:** Of the menopausal women under study, 52.7% were aged between 45 and 54 years with a mean age of 52.5±5.08 years, 53.8% used CAM, and 20.7% reported that friends were the source for them to try CAM. Honey, Holy Qur'an, and positive thinking were the most categories used as CAM. Moreover, advice from the Internet was the most influential predictor. **Conclusion:** The mean MENQOL score was not significantly different between CAM users (mean MENQOL score=2.181.15) and non-users (mean MENQOL score = 2.010.88) ( $p = 0.593$ ). Furthermore, practically all CAM users had a lower quality of life than non-users. **Recommendations:** Additional research is needed to assess other CAM-related modalities.

**Keywords:** Complementary and Alternative Medicine, Menopausal Women, Quality of Life.

## Introduction

Menopause is a natural biological process in which estrogen levels drop and the menstrual cycle ceases when egg follicles are depleted. Menopause occurs naturally between the ages of 40 and 58, with an average age of 51. Vasomotor symptoms are menopausal symptoms such as hot flashes and nocturnal sweating. Hot flashes are the most prevalent and unpleasant symptom of menopause, marked by a sudden and intense feeling of warmth that starts in the chest and travels to the chest and neck (*Marlatt, Beyl & Redman, 2018*).

The levels of luteinizing hormone and epinephrine in the bloodstream dramatically increase after menopause (a powerful cardiac stimulator that raises systolic blood pressure, cardiac output, and heart rate) and a concurrent fall in nor-epinephrine levels (which increases blood pressure significantly). In the case of heat flashes, the parasympathetic branch has received little attention. Although it was previously thought that the increased heart rate associated with hot flashes was caused by sympathetic influences, reduced parasympathetic effects (given to the heart via the vagus nerve) or enhanced sympathetic cardiac regulation, or both, might be the source of real alterations in heart rate (*Ozcan, Çolak, Oturgan, & Gülsever, 2019*).

In Egypt, the prevalence of hot flashes ranged from 76.8% (*Sweed, Elawam, Nabeel, & Mortagy, 2012*) to 90.7% (*Loutfy, Abdel Aziz, Dabbous, & Hassan, 2006*) among postmenopausal women. Hot flashes usually disappear after a few years of menopause; however, some people experience the symptom for years after they stop menstruating. The prevalence of hot flashes in older postmenopausal women has yet to be extensively documented, and why some women's hot flashes disappear after a few years, while

others 'hot flashes remain for years is unclear (*Pan, et al., 2020*).

Quality of life is defined by the World Health Organization (WHO) as a person's appraisal of their place in life in relation to their objectives, aspirations, standards, and concerns, as well as their culture and value systems. Many studies show that women in their menopausal stage have a lot of sweats hot and flashes (71.2 percent and 41.6 percent–). However, muscle illnesses and joint (80.1%), mental and physical exhaustion (67.1%), sleeplessness (65.1%), discomfort vaginal and dryness with intercourse (57%), 37.9%) and other difficulties have also been studied (*Gartoulla, Davis, Worsley & Bell, 2015*).

Treatment is necessary as the length of time spent in the menopausal period rises; also, menopause-related health issues have a severe influence on quality of life of the women. Medical therapies for symptoms of menopause are important therapeutic tools; yet, many women dislike them because of their complicated biological consequences and limited benefits against risks (*Chiu, Pan, Shyu, Han, & Tsai, 2015; WHO, 2014*).

Complementary and alternative medicine (CAM) is a term that describes a range of healthcare and medical systems, products and procedures, that aren't now deemed mainstream. Although their effectiveness has yet to be shown, women are increasingly turning to complementary and alternative medicine (CAM) therapies to help them cope with menopausal symptoms because they believe they are more natural and safer (*WHO, 2019*).

According to the WHO's "Traditional Medical Strategy" report for 2014–2023, In many industrialized nations, interest in complementary and alternative medicine (CAM) has grown, and it is now

widely used (40 percent–80 percent) (WHO, 2014). Moreover, the usage of CAM increases between 37.4% and 55.0% during the menopausal stage (*Ege, Kal, & Altuntug, 2014*). Women turn to CAM treatments, as they believe that these treatments are useful in managing vasomotor symptoms in particular. Phytoestrogens and physical–mental techniques were the most popular among women (*Johnson, Roberts, & Elkins, 2019*).

Despite this, few researches look at the link between the quality of life and complementary alternative medicine (CAM) use during menopause. Traditional acupuncture can help with vasomotor symptoms, Women's quality of life can be improved through yoga, and a Mediterranean diet and physical activity can help with homeostasis and overall health. Silva et al. discovered that by utilizing a passive body warming technique, women with poor sleep quality after menopause due to fibromyalgia improved their sleep quality (*Gokgozand & Pinar, 2020*).

While there are various researches in Egypt on ways for coping with the use of CAM and menopausal symptoms in menopause, there are only a few studies on the influence of CAM usage on quality of life, according to the literature.

### **Significance of the Study**

Postmenopausal women experience symptoms that can lead to physical and psychological stress associated with this stage. (*Liao et al., 2015*). As a result, a large number of postmenopausal Egyptian women face various health problems including physical and psychological distress, so large numbers of women seek to use complementary and alternative medical treatments specifically to alleviate menopausal symptoms and improve quality of life including Particular herbs and acupuncture (*Ustundag, & Zencirci, 2015*). Hence, exploring the use of CAM by

menopausal women is very important as it may lead to similar studies being undertaken and evaluated. This study is considered unique because it aims to estimate the prevalence of CAM use & its associated factors among menopausal women. Also to compare QOL between CAM users & non-users.

### **Aim of the study**

This study was designed to estimate the prevalence of CAM use & its associated factors among menopausal women. Also to compare QOL between CAM users & non-users.

### **Research Questions:**

*The research question for which the researchers tried to find out the answer were:*

Is there a relationship between CAM users and non-users in reducing symptoms and improving health-related quality of life in menopausal women?

### **Subjects and Method**

#### **Study design:**

This study followed a descriptive cross-sectional research design, which relies on the study of a particular phenomenon by describing and showing its relationship to other phenomena.

#### **Setting:**

The present study was conducted in 12 primary healthcare facilities, affiliated with Port-Said which are part of a comprehensive health insurance group. The primary healthcare centers were chosen at random and represent six districts in Port Said Governorate: Al-Manakh, Al-Dawahi, AlZohour, Al-Arab, Al-Gharb, and Al-Janoub. A clinic for women's healthcare is located at each facility.

#### **Study population:**

All women attending the aforementioned settings aged between 45 and 70 years were enrolled. A woman was considered menopausal if 12 months had passed after her last menstrual period (**National Collaborative Center for Women's and Child Health, 2015**). Besides, the minimum use of CAM should be ranged from 6-12 months at least. Meanwhile, we eliminated women with induced amenorrhea, those who had a simple hysterectomy, those who are already on hormone medication, and those who had medical illnesses including hypertension, diabetes, heart disease, or thyroid disorders, as these might cause our results to be skewed. Women who declined to take part in the study were also eliminated.

**Subjects:**

The study participants encompassed a convenient sample of all post-menopausal women (1296) who fulfilled the inclusion criteria and attended the selected settings during the period from February 2021 to the end of April 2021.

**Sample size**

$$n = \left( \frac{Z_{1-\alpha/2} + Z_{1-\beta}}{ES} \right)^2$$

The standard normal deviate for  $\alpha = Z_{\alpha} = 1.960$

The standard normal deviate for  $\beta = Z_{\beta} = 11.45$

A = 8

B =  $(Z_{\alpha} + Z_{\beta})^2 = 7.8489$

C =  $(E/S (\Delta))^2 = 0.3906$

AB/C = 11296

$n = \left( \frac{1.96 + 11.45}{0.3906} \right)^2 = 1296$  patients

Sample size will be 1296 patients to achieve a power of 95% and a level of significance of 5% (two sided), assuming the standard deviation of the differences to be 8 between pairs (**Rosner, 2016**).

**Tools of data collection:**

The study data were collected by using the following two instruments:

**Tool I: Survey Instrument: The survey tool was divided into three parts:  
The first part**

The researcher in the Arabic language developed the first part of this structured sheet. It was used to collect data about the personal characteristics of the studied including Age, economic status, occupation, and educational level.

**The second part**

This questionnaire was revised by **Silpakit and Boonyanurak (2017)** it is a self-reported questionnaire contained 15 closed-ended questions. The women's menstrual cycles and symptoms were used to determine their menopausal status and symptoms which measured menopausal states symptoms such as (Hot flush, Night sweats, Heart beats strong/quick, Tense....etc.,

**The third part consisted**

This part was developed by **Silpakit and Boonyanurak (2017)**. It consists of 18 closed-ended questions to measure the usage of complementary and alternative medicine (CAM) among women using a checklist that encompassed all CAM categories and individual kinds there were four primary types of CAM on the list. Physical therapies such as exercise, acupuncture, bodywork, acupressure, and massage were included in the first category. The second category included psychological therapies such as mental imagery, meditation, and relaxation. Special diets or nutritional therapies, such as vegetarian diets or macrobiotics, supplements, and vitamins, were the third kind of CAM. Herbal or Herbs medicines, such as Chinese herbs or teas, traditional Chinese medicine, and homeopathy, made up the fourth form of complementary and alternative medicine.

**Scoring system**

The first, second, and third parts of the questionnaire were translated into Arabic by the researcher, a certified medical

translator herself. All items had the response options of yes/no or an open response, and to be considered a CAM user, a woman indicated the use of one or several therapies.

### **Content Validity and Reliability:**

Five experts in nursing field-tested content validity. The questionnaire was modified according to the expert's comments and recommendations. Cronbach Alpha coefficient was used to evaluate the internal consistency of the translated tools to establish the scale's dependability. It was 0.91.

### **Tool II: Menopause-Specific Quality of Life (MENQOL) Questionnaire**

*Lewis et al., (2005)*, developed the MENQOL, a self-report measure that assesses the presence and severity of menopausal symptoms, as well as the degree to which they negatively influence women's quality of life. It has 29 items separated into four domains: vasomotor (three), psychosocial (seven), physical (16 items), and sexual (three). Nocturnal sweats, sweating, and hot flushes, are all assessed in the vasomotor domain. The psychosocial domain evaluates an individual's psychological well-being by includes characteristics such as memory, worry, and a "blue" sensation. Bloating, flatulence, exhaustion, discomfort, energy, sleeping, and weight gain are all evaluated in the physical arena. Vaginal dryness, closeness and changes in sexual desire, are all evaluated in the sexual domain.

### **Scoring system:**

Each of the four MENQOL domains has the same systematic score. When the administration of MENQOL is converted for a score and data analysis, the Likert seven point balance is applied. This seven-point Likert scale is translated to an eight-point scale, ranging from 1 to 8, for each of the 29 items. 1 responds to a woman who says "no," suggesting she hasn't had this symptom in the previous month. 2 indicates that the lady

had the symptom, but it was not troublesome at all. 3–8 correlate to the "1" through "6" and reflect increasing levels of discomfort caused by the symptoms. "The score per domain, which varies from 1 to 8, is the average of the scores of the converted elements that make up that domain." Menopause symptoms were categorized into three severity levels: mild, moderate, and severe. Scores ranging from 2 to 4 were deemed mild symptoms, ratings ranging from 5 to 6 were considered moderate symptoms, and scores ranging from 7 to 8 were considered severe symptoms.

### **Content validity and reliability:**

To determine the content validity of the tools, the researchers presented them to five specialists in the domains of family and community health nursing and obstetrics and gynecologist nursing, who conducted face and content validation of all items. All of the suggested adjustments have been implemented. Furthermore, the validity of the instruments is supported by employing the MENQOL while evaluating standard evidence. The MENQOL questionnaire had strong test-retest reliability, with a one-day delay between testing. Cronbach's alpha coefficient was used to assess domain internal consistency for each questionnaire, and the degree of reliability was 88 %.

### **Pilot study**

A pilot research was done using 10% of the study population (129 women) who were chosen at random. A pilot study was done to confirm that the data-gathering methods are relevant, useable, and appropriate. Women who participated in the pilot research were excluded from the study's sample to maintain statistical significance. The tools were not changed as a result of the pilot research. From the beginning of September 2020 until the end of September 2020, a pilot study was conducted.

### **Field Work:**

After clarifying the research's goal, an official letter from the Dean of the Faculty of Nursing at Port Said University was addressed to the directors of the aforementioned settings, seeking their permission and cooperation to conduct the study; this stage took one week. The information was obtained two days every week on Sundays and Tuesdays. To protect the privacy and security of the acquired data, the face-to-face interview approach was used on an individual basis in a secluded spot in the center. The information was gathered during a five-month period. From the beginning of February until the end of June 2021, the real field of work was completed. Then, from 10 a.m. to 6 p.m., 12–15 research participants were interviewed. Depending on their comments, each interview lasted 30 to 40 minutes. Following that, the researcher double-checked the accuracy of all tools' statements. Those that worked together were praised for their efforts.

### **Ethical considerations:**

Firstly, the research proposal was approved by the Scientific Research Ethical Committee of the Faculty of Nursing, Port-Said University. Secondly, approval was obtained from the selected settings from which the data were collected. Thirdly, a verbal agreement was obtained from the woman afterward a plain overview of the intention of the study, fourthly, anonymity and voluntary participation in the study were guaranteed. Finally, confidentiality was affirmed for all participants in the study and researchers confirmed that information would be used merely for the research purpose.

### **Data analysis:**

The computer utilized in this study was IBM compatible, and the data was gathered, tabulated, and statistically analyzed using Statistical Package for the Social Sciences, version 24. The data was

quantified and tabulated using means and standard deviations, frequencies, and percentages. A t-test or analysis of variance (for more than two groups) was utilized as statistical approaches. A logistic regression model using exposure components was employed to predict the outcome variable. Finally, the variables linked with CAM usage were identified using odds ratios with 95 percent confidence intervals and p-values of less than 0.05.

### **Results**

**Table 1** shows that 52.7% of the menopausal women were aged between 45 and 54 years, with a mean age of  $52.5 \pm 5.08$  years; 70.3% were married; and 31.2% had secondary level of education. Besides, the findings revealed that 67.4% of the menopausal women unemployed. Moreover, 53.8% of the menopausal women used CAM.

**Figure 1** shows that 20.7% of the menopausal women reported that friends were the main source of CAM advice.

**Table 2** shows the categories of CAMs used by the postmenopausal women in the study. Honey (23%) was the most common dietary and nutritional supplement used by the menopausal women under study. Regarding stress-reducing techniques, 40.2% of the menopausal women have used the recitation of the Holy Qur'an to reduce their stress levels. Regarding traditional CAM therapies, 35.2% of the menopausal women used positive thinking as a traditional CAM therapy.

**Table 3** shows that the most common symptoms experienced by postmenopausal users of CAM were sleep disturbances. ( $3.04 \pm 2.075$ ), tense ( $2.76 \pm 1.932$ ), pain ( $2.74 \pm 2.014$ ), hot flushes ( $2.53 \pm 2.201$ ), and night sweats ( $2.37 \pm 2.145$ ). In contrast, the most common related symptoms experienced by

menopausal CAM non-users were sleeping difficulties (2.42 ±2.021), pain (2.33 ±1.983), tense (2.23 ±1.888), and mood swings (1.86 ±1.874). Furthermore, statistically significant differences in the mean scores of related symptoms were observed between menopausal CAM users and non-users ( $p \leq 0.05$ ).

The average MENQOL scores in the vasomotor, psychosocial, physical, and sexual domains are shown in **Table 4**. The mean MENQOL scores of CAM users (mean MENQOL score=2.181.15) and non-users (mean MENQOL score = 2.0100.88) did not vary significantly ( $p = 0.593$ ). According to the findings, CAM users who used practically all forms of

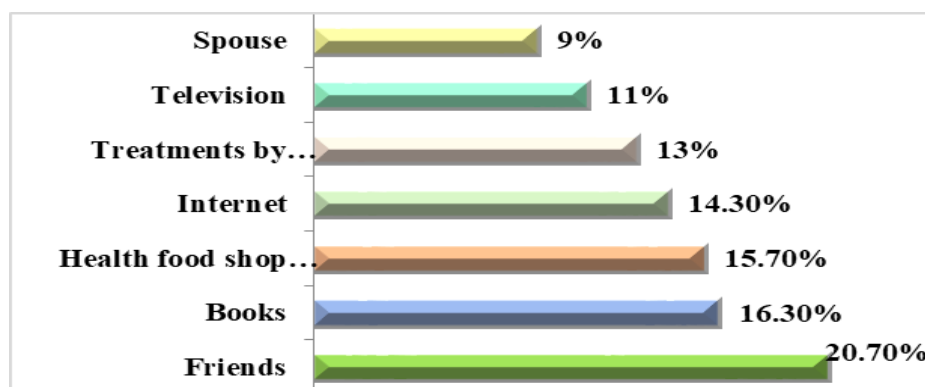
CAM had a lower quality of life than CAM non-users.

**Table 5** shows that the independent positive predictors for CAM use among menopausal women were present health status, advice from friends, advice from the Internet, and advice from books. Advice from the Internet was the most influential predictor. The model showed that 23% was the variation in the factors affecting function for predicting CAM use among menopausal women. None of the other factors had a significant influence on this score.

**Table 1: Personal characteristics of the menopausal women under study (n=1296).**

Characteristic	No.	%
<b>Age group (years)</b>		
45–54	683	52.7
55–64	379	29.3
≥65	234	18.0
Mean ± SD	52.5±5.08	
<b>Marital status</b>		
Married	899	70.3
Unmarried	379	29.7
<b>Education</b>		
Illiterate	74	5.7
Read and write	192	14.8
Primary level	313	24.1
Secondary level	403	31.2
Graduate	188	14.5
Postgraduate	126	9.7
<b>Occupation</b>		
Employee	421	32.6
Not employed	872	67.4
<b>Used CAM</b>		
Yes	697	53.8
No	599	46.2

**Figure (1): Sources of Complementary and Alternative Medicine advice among menopausal women (n=1296).**



**Table 2. Complementary and Alternative Medicine categories used among the menopausal women under study (n=697).**

<b>Nutritional and Dietary supplements(n = 439)</b>	<b>No.</b>	<b>%</b>
Honey	101	23
Olive oil	79	17.9
Antioxidants	68	15.4
Fennel flower seeds	31	7.2
Ginger	27	6.3
Special diet	25	5.6
Herbs	21	4.7
Dates	19	4.3
Vitamins/minerals	17	3.8
Camel milk	16	3.7
Barely water	16	3.7
Royal jelly	11	2.6
Vinegar	8	1.8
<b>Stress-reducing techniques (n = 167)</b>		
Recitation of the Holy Qur'an	67	40.2
Performing prayers	56	33.5
Wet cupping	34	20.4
Religious lectures	6	3.4
Exorcism	4	2.5
<b>Traditional CAM therapies (n = 91)</b>		
Thinking Positively	32	35.2
Relaxation techniques	23	25.3
Massage	14	15.4
Group therapy	11	12.1
Treatment 'cupping	7	7.6
Therapy's art	4	4.4



**Table 3. Mean scores of related symptoms of menopausal women CAM users and non-users (n=1296).**

Menopausal symptoms	CAM user (697)	CAM non-user (599)	T-test	P-value
	Mean ±SD	Mean ±SD		
Hot flush	2.53±2.201	1.56 ±1.866	1.1279	<0.001
Night sweats	2.37 ±2.145	1.53 ±1.856	1.1271	<0.001
Heart beats strong/quick	1.69 ±1.892	1.30 ±1.651	1.1280	<0.001
Tense	2.76 ±1.932	2.23 ±1.888	1.1285	<0.001
Sleeping difficulties	3.04 ±2.075	2.42 ±2.021	1.1282	<0.001
Panic attacks	1.41 ±1.862	0.94 ±1.585	1.1282	<0.001
Mood	2.36 ±1.966	1.86 ±1.874	1.1275	<0.001
Dizziness	1.43 ±1.754	1.06 ±1.527	1.1281	<0.001
Headache	2.12 ±1.930	1.82 ±1.845	1.1280	0.004
Pain	2.74 ±2.014	2.33 ±1.983	1.1288	<0.001
Crawling under the skin	1.15 ±1.838	0.70 ±1.462	1.1288	<0.001
Breathing difficulties	1.00 ±1.625	0.70±1.386	1.1288	<0.001
Menstrual irregularities	0.93 ±1.738	0.66 ±1.460	1.1282	0.002
Bladder infections	0.49 ±1.247	0.38 ±1.084	1.1277	0.08
Vaginal dryness	1.65 ±2.004	1.15 ±1.809	1.1280	<0.001

\*: Statistically significant at  $p \leq 0.05$ .

F: F for analysis of variance.

**Table 4. CAM users and non-users' mean Menopause-Specific Quality of Life (MENQOL) scores.**

Domain	CAM users (n = 697)	CAM non-users (n = 599)	P-value
	Mean ± SD	Mean ± SD	
Vasomotor	2.36±1.67	2.25±1.55	0.733
Psychosocial	1.82±1.16	1.74±1.04	0.825
Physical	2.38±1.37	2.20±1.08	0.597
Sexual	2.01±1.75	1.51±1.14	0.084
<b>Total</b>	<b>2.18±1.15</b>	<b>2.01±0.88</b>	<b>0.593</b>

\*: Statistically significant at  $p \leq 0.05$

**Table 5. Multiple linear regression models for factors affecting function for predicting CAM use among menopausal women.**

	$\beta$	SE	Beta	P-value	T-test	95.0% CI
Constant	-1.71	0.32	0.18	<b>&lt;0.001</b>	<b>17.340</b>	(1.01–1.25)
Present health status	0.12	0.05	1.12	<b>&lt;0.001</b>	3.991	(1.55–2.60)
Hot flush severity	0.70	0.13	2.01	0.054	-1.947	(1.64–3.05)
Sleeping difficulties	0.80	0.16	2.24	0.004	0.74	(1.15–1.98)
Medical treatments	0.41	0.14	1.51	0.12	2.547	(1.13–2.21)
Advice from friends	0.46	0.17	1.58	<b>&lt;0.001</b>	12.72	(2.44–6.64)
Advice from the Internet	1.39	0.26	4.03	<b>&lt;0.001</b>	11.91	(1.16–2.57)
Advice from health food shop assistants	0.55	0.20	1.73	0.044	2.032	(1.32–2.84)
Advice from books	0.66	0.20	1.93	<b>&lt;0.001</b>	4.638	(1.29–2.51)
Advice from spouse	0.59	0.17	1.80	0.46	2.010	(1.24–6.65)
<b>R<sup>2</sup> = 0.23, <math>\chi^2 = 8.99</math>, df = 8 (p&lt;0.001)</b>						

## Discussion

During the menopausal transition, women may have substantial vasomotor, sexual, psychological, and physical problems. Night sweats and hot flashes are the most prevalent vasomotor symptoms, with one in every two postmenopausal women perceiving them as troublesome. According to a meta-analysis, they can last for several years following menopause, affecting quality of life of the women and feeling of well-being. The most effective treatment for vasomotor symptoms is hormone therapy. It decreases the frequency and severity of these events by 75% while also improving health-related quality of life. Hormone therapy use, on the other hand, has decreased since 2002, when initiation of the women's health found that hormone therapy users had higher risks of cardiovascular events and breast cancer. This decrease has been linked to an increase in the use of CAM to treat menopausal symptoms. Although complementary and alternative medicine (CAMs) is popular among women, there is no evidence to support their use in the treatment of menopausal symptoms (*Gentry-Maharaj et al., 2017*). As a result, this research looked at the impact of complementary and alternative medicine (CAM) on postmenopausal women's quality of life.

The findings revealed that slightly more than half of the menopausal women in this research were between the ages of 45 and 54, with a mean age of 52.55.08 years. This finding backs up the fact that the average age of menopause onset in the globe is 51 years old, with a range of 45 to 55 years. The average age of menopause onset in underdeveloped nations is lower than in industrialized countries. In industrialized nations, the typical age of onset is 49.3 to 51.4 years, whereas in developing countries, it is 43.5 to 49.4 years. Jordan, for example, has a 50–51-year-old population, whereas Turkey has a 47-year-old population, and Egypt has a 48-year-old population (*Gharaibeh, Al-Obeisat, and Hattab, 2010*).

Besides, the findings clarified that more than two-thirds were married and nearly one-third could read and write only; moreover, two-thirds of the menopausal women unemployed. These results emphasize the importance of family bonding and structure, even though they can quit work to take care of their husbands, children, and the rest of the family, among the Egyptian society, in addition to the necessity of education under the authority of

the president of the republic. This finding agrees with that of **Ozcan, Çolak, Oturcan, and Gülsever (2019)**, who conducted a study entitled “Complementary and alternative treatment methods for menopausal hot flashes used in Turkey “and elaborated that most women were married housewives who graduated from primary school.

Furthermore, the data reported that more than half of menopausal women utilized CAM. In addition, less than two-thirds of menopausal women had their last period more than a year ago. This coincided with the findings of a study conducted in Germany by **Buhling, Daniels, Studnitz, Eulenburg, and Mueck (2014)** on the use of complementary and alternative medicine (CAM) by women transitioning through menopause; that study found that almost half of the women in the study had tried at least one kind of CAM, either alone or in combination with hormone replacement therapy, to help them cope with the symptoms of menopause. Women utilized complementary and alternative medicine (CAM) five times more than hormone replacement therapy to manage menopausal symptoms.

Moreover, **Johnson, Roberts, and Elkins (2019)** in their study entitled “Complementary and Alternative Medicine for Menopause” have reported that menopause symptoms are often treated using CAM therapies, such as mind-body techniques, herbal products, and other whole-system alternative medicine methods. In addition, **Taebi, Abdollahian, Ozgoli, Ebadi and Kariman (2018)** conducted a systematic review of strategies for improving the quality of life related to menopause and reported that from the existing strategies to improve menopause-related quality of life, using CAM is an efficient method, used by many women go through menopause and may be most

effective when consumed in conjunction with physical exercise and participation in educational programs.

Regarding sources of CAM advice, it was observed that one-fifth of the menopausal women reported that friends were the main source of advice. This result agrees with that of **Cardini et al. (2010)**, who, in their study entitled “The use of complementary and alternative medicine by women experiencing symptoms of menopause in Bologna,” revealed that women had access to several sources for information on CAM. The most popular sources of information were medical practitioners, books, herbalists, magazines, friends or neighbors, and pharmacists.

Furthermore, the findings indicated that honey was the most commonly used dietary and nutritional supplement among menopausal women who use this category, two-fifths of the menopausal women recited the Holy Qur’an to reduce their stress levels, and one-third of them used positive thinking as a traditional CAM therapy. From the researcher’s viewpoint, the use of honey and the recitation of the Holy Qur’an among menopausal women are due to their adherence to the teachings of the tolerant Islamic religion and the Sunnah of our master Muhammad, “may God’s prayers and peace be upon him,” where the Qur’an and hadiths indicate the consumption of honey for treating and healing all diseases, including menopause, and prayer is an excellent source to eradicate stressful psychological pressure, especially among menopausal women. Furthermore, positive thinking has its huge merits to reduce and eradicate feelings of tiredness, as reported by psychologists.

Because of differences in culture, customs, traditions, faiths, educational techniques, upbringing, environment, living situations, and political and economic factors, these conclusions differ from those

of other research. *Cardini et al., (2010)* found that herbal products (which comprised Cimicifuga and phytoestrogens produced from Dioscorea, soy, or other plants in the form of tablets or decoctions) (41.4 %) and more soy in the diet were the most popular (26.2 %).

Furthermore, according to *Johnson, et al. (2019)*, mind–body techniques may be beneficial in lowering tension and pain induced by various menopausal symptoms. Hypnosis, in particular, is a mind–body technique that has regularly been found to reduce hot flashes in a clinically meaningful way. The evidence for the efficacy of natural products is varied, and there are significant safety concerns. In delivering an integrated health approach to menopausal symptom treatment, healthcare professionals should evaluate the data on complementary and alternative medicine (CAM).

Furthermore, in their study "Use of Complementary and Alternative Medicine for Menopause Symptoms and its Effect on the Quality of Life of Turkish Women," *Gokgoz and Pinar (2020)* discovered that bio-based therapies (90.5%), with the use of herbal medicine, are the most common practice used during menopause, followed by mind–body interventions (83.3%) and body-based methods (34.5%); for example, exercises and acupuncture are common practices.

In the same context, the findings indicated that the most reported related symptoms of menopause among CAM users were sleeping difficulties ( $3.04 \pm 2.075$ ), tense ( $2.76 \pm 1.932$ ), pain ( $2.74 \pm 2.014$ ), hot flushes ( $2.53 \pm 2.201$ ), and night sweats ( $2.37 \pm 2.145$ ). In contrast, the most reported related symptoms of menopause among CAM non-users were sleep disturbances ( $2.42 \pm 2.021$ ), pain ( $2.33 \pm 1.983$ ), tension ( $2.23 \pm 1.888$ ) and mood ( $1.86 \pm 1.874$ ), and mood ( $1.86 \pm 1.874$ ). Furthermore, there were highly statistically significant

differences in the meanscores of related symptoms of menopause between women CAM users and non-users ( $p \leq 0.05$ ). From the researcher's viewpoint, this difference between users and non-users emphasizes the necessity of CAM in reducing and alleviating the severity of menopausal symptoms and promoting health.

This contradicts the findings of a study conducted by *Silpakit and Boonyanurak (2017)* titled "Comparison of the Quality of Life between Users and Non-Users of Complementary and Alternative Medicine in Thai Women with Menopause-Related Symptoms Aged 45 Years Old and Above," which found that the three most commonly reported symptoms in CAM users were weight gain (92.2 percent), accomplishing less (87.3 percent), and wanting to be alone or feeling depressed (86.3%). Nonetheless, there was no significant difference in any of these symptoms between CAM users and non-users.

The most common symptoms among postmenopausal women, according to *Buhling et al. (2014) and Gokgoz and Pinar (2020)*, varied from vasomotor symptoms such as night sweats and hot flushes to bladder difficulties. Furthermore, *Biglia et al. (2019)* found that hot flushes are the most annoying symptoms of menopause, up to 85% of menopausal women are affected with varying frequency, severity, and duration in their study on non-hormonal techniques for treating menopausal symptoms in cancer survivors. Hot flushes usually begin during the menopausal transition and remain for 7–10 years; however some women may suffer them for longer.

There was no substantial difference in overall quality of life between CAM members and non-, according to the findings of this study. The disparate outcomes might be attributable to the research' various

experimental designs. Due to variances in quality of life evaluation instruments (i.e., Menopause Rating Scale, Modified Greene Climacteric Scale, and Utian Quality of Life), the definition of CAM, population characteristics, and participants' health statuses, comparing our findings to those of other research was challenging. Nonetheless, this research is significant since it is the first of its kind among Egyptian women. In this study, there was no significant difference between CAM users and non-users in terms of the effects of CAMs on menopausal women's quality of life. The findings, however, indicated that CAMs have a detrimental influence on CAM users. This might be an indirect sign of CAM's ineffectiveness. However, because the design of this study can't tell us how effective CAM is, more research with more appropriate designs is needed to assess its effectiveness.

In contrast, one Italian cross-sectional study (*Cardini, 2010*) found that postmenopausal women with severe postmenopausal symptoms were more likely to use Cams to relieve menopause-related symptoms. This might explain why women who utilize alternative therapies have a worse quality of life than those who do not. Furthermore, *Gokgoz and Pinar (2020)* found that the vasomotor, psychosocial, physical, and sexual quality of life of CAM-using women was greater than that of women who did not use CAM (p0.05).

## Conclusion

According to the current study's findings, there was no significant difference in quality of life between CAM users and non-users among the women with menopause-related symptoms. The study's findings revealed a link between the study's quality of life scores and a variety of complementary and alternative medicine treatments. Present health status, advice from friends, and literature were all independent positive predictors of CAM

usage among menopausal women, but advice from the internet was the most influential predictor.

## Recommendations

*From the existing study results, the following recommendations were proposed:*

1. Designing and applying multimedia intervention programs to help women with menopause manage the reduction of their symptoms.
2. There is a necessity to address assess the efficacy of CAM in various modalities.

**Future studies** should be conducted using large probability samples to further research with more appropriate experimental designs is needed to acquire a better understanding of the influence of complementary and alternative medicine (CAM) on the quality of life of menopausal women.

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