

## Effect of Acupressure on Menopausal Symptoms among Women

Sahar Anwar Rizk

Obstetric and Gynecologica Nursing Department, Faculty of Nursing, Alexandria University, Egypt.

[soanwar@yahoo.com](mailto:soanwar@yahoo.com)

**Abstract:** Many women experience various menopausal symptoms. Because of recent concerns about hormonal replacement therapy (HRT), some women have turned to complementary and alternative therapies. One of the areas of complementary and alternative therapy is acupressure. Numerous studies indicated positive effect of acupressure, especially on hot flushes yet, others did negate such effect on menopausal symptoms. Therefore, this study **aimed** to identify the effect of acupressure on menopausal symptoms among women. **Setting:** The study was conducted at El-Shatby Maternity University Hospital in Alexandria. The **sample** comprised a conveniently chosen 80 menopausal women working in the previously mentioned setting, complaining of moderate to severe menopausal symptom they were randomly assigned equally into either a study or a control group. Each subjects in the study group attended 9 acupressure sessions 20 minutes each at (LI-4&SP-6 & HT7& TW 5) acupressure points simultaneously. While the subjects in control group received routine care, using a randomized control clinical trial study design. **Three tools** were validated and used to collect data; general characteristic and reproductive history interview schedule, menopause rating scale and daily life activities scale. **Results:** The main study findings show that, all subjects had moderate to severe menopausal symptoms (MS) before the intervention with no statistically significant difference between the study and control groups. Yet, after two and three weeks from the intervention physical and psychological menopausal symptoms were significantly improved among the study group than control one. Moreover, a significant improvement on daily life activities was evident after two and three weeks from intervention among the study than control group. The study **Concluded** that acupressure was effective in decreasing the severity of physical, psychological menopausal symptoms as well as in improving daily life activities among menopausal women. In the light of the study results, it was **recommended that** complementary therapy especially acupressure should be incorporated in all Maternity hospital policies.

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### 1. Introduction

Menopause is a permanent cessation of menstruation. It is an important landmark in women's life. Most women experience natural menopause between 45 and 55 years of age. It occurs as a part of a woman's normal aging process through the eventual depletion of almost all of the oocytes and ovarian follicles in the ovaries. This causes an increase in circulating follicle stimulating hormone (FSH) and luteinizing hormone (LH) levels as well as decrease in the production of estrogen which leads to the menopausal symptoms.<sup>(1-3)</sup>

Menopausal women experience a variety of symptoms which are divided into short and long term sequelae. Short term sequelae includes: vasomotor symptoms (hot flushes and night sweating) which affect 80% of menopausal women. Somatic symptoms such as episodes of sweating, heart discomfort, sleep problems, joint and muscular pain. Uro-genital symptoms such as sexual problems and bladder problems. Psychological problems such as depressive mood, sadness, mood swings, irritability, anxiety, restlessness and feeling of panicky. While long term sequelae include: cardiovascular disease and osteoporosis.<sup>(4,5)</sup> When these symptoms are

strong enough it significantly disrupt the everyday life of the woman experiencing them.<sup>(6)</sup>

Because of the recent concerns about hormonal replacement therapy, some women have turned to complementary and alternative therapies (CAT) for the treatment of their menopausal symptoms. One of the areas of complementary and alternative therapy is acupressure.<sup>(6)</sup>

Acupressure is defined as the practice of applying manual pressure into certain points in the body for therapeutic purposes. The mechanism by which acupressure and /or, acupuncture might affect health or menopausal symptoms is not completely understood. According to the Chinese medicine theory, the human body and the universe are one energy system that cannot be separated from one another. Energy is viewed as the force that integrates the body, mind and spirit. Basic life energy called ("chi" or "qi") flows through the body along meridians and the disruption of this flow causes disease. The goal of acupressure is to stimulate the circulation of chi, by activating very specific points, called pressure points or acupoints. Through the stimulation of the specific points, acupressure tries to re-establish the energy balance in order to treat disease.<sup>(7,8)</sup> The

meridians are pathways start at the pressure point on the skin, connect to the brain, then connect to the organ associated with the specific meridian. The meridians are distinct channels that circulate electrical energy throughout the body. They are thought to be part of a master communication system of life energy, connecting the organs with all sensory, physiological and emotional aspects of the body.<sup>(9,10)</sup>

**Significance of the study** acupressure is known as energetic healing therapy that may reduce muscle pain, tension, improve blood circulation and release endorphins. It enables muscle fibers to relax, allows blood to flow more freely & toxins to be released, eliminated and the body's life force to aid healing.<sup>(10,11)</sup> It may be a useful strategy for the management of multiple symptoms in a variety of patient populations, but rigorous trials are needed to prove that. Moreover, some authors agreed that acupressure may reduce menopausal multiple physical and psychological symptoms. While others had reported a limited scientific evidence about the effectiveness of acupressure on relief of this symptoms.<sup>(11)</sup> So, this study, in turn, paves the way to introduce acupressure in official nursing practice by testing its efficacy on relieve menopausal symptoms.<sup>(12)</sup>

#### **Aim of the Study**

Determine the effect of acupressure on menopausal symptoms among women

#### **Research hypothesis:**

Women who receive acupressure exhibit less severity of menopausal symptoms as well as had good daily life activities than those who do not receive such an intervention.

## **2. Materials and Method.**

### **Design:**

A randomized control clinical trial was utilized.

### **Materials**

### **Setting:**

The study was conducted at El-Shatby Maternity University Hospital in Alexandria.

### **Subjects:**

A convenience sample of 80 menopausal working women, were purposefully selected from the above mentioned setting, according to the following criteria:

1. Complaining from moderate to severe menopausal symptom according to the menopause Rating Scale (MRS)
2. Free from any medical or gynecological diseases.
3. Do not use hormonal replacement therapy.
4. Willing to participate in the study.

The study subjects (80) were randomly assigned to either a study (40) or a control group (40).

### **Tools:**

Three tools were used for data collection:

**Tool I:** General characteristic and reproductive history interview schedule:

This tool was developed and used by the researcher to elicit basic data about subjects such as: age, level of education and reproductive history.

**Tool II:** Menopause Rating Scale (MRS)

It was originally developed by Potthof *et al.* (2000)<sup>(13)</sup> to assess menopausal physical and psychological symptoms. It was adapted and modified by the researcher to suit the Egyptian culture. It contains 9 items under two groups: physical symptoms (5 items) and psychological symptoms (4 items).

For each one of 9 items the subject had to choose one of four alternatives. (0) absent, (1) mild, (2) moderate, and (3) sever.

Subjects' total score ranged between 0-27 where:

- < 7 No menopausal symptoms (MS)
- 7-13 Mild MS if her total score
- 14-20 Moderate MS if her total score
- $\geq 21$  Sever MS if her total score

**Tool III :** Daily life Activities Scale

It was developed by the researcher to assess the quality of the subjects' daily life activities. It contains three items. For each one of the three items the subject has to choose one of four alternatives: (0) poor, (1) fair, (2) good, or (3) sever.

Subjects' total score ranged between 0-12 where:

- < 3 No effect of MS on daily life activities
- 3-6 Mild effect
- 7-9 Moderate effect
- >10 Sever effect

### **Methods**

-**Approval** was obtained from the ethical committee of the faculty of nursing- Alexandria University and the responsible authorities of the study settings.

-The researcher attend a special training on how to conduct acupressure. An accredited certificate to practice acupressure was obtained.

-**Development of tools I & III** were done by the researcher after extensive review of relevant and recent literature. while tool II was adapted and modified by the researcher. Their content validity was assessed by 5 experts in the related field. Tool II& III reliability was accomplished by split half reliability technique. The scales has high internal consistency with (Cronbach's alphas = 0.885 for tool II& = 0.792 for tool III).

-**A pilot study** was carried out on 8 of menopausal women served to ensure clarity, applicability, time of administration for the tools of data collection. Based on the pilot results; there was no need for amendment in the tools. The subjects of the pilot were excluded from the main study sample.

**The study was conducted through three phases:****The prescreening phase:**

All menopausal women (between the age of 45-55) working in the previously mentioned setting had attending a class room about the purpose of the study.

- **Ethical consideration:** an oral consent was obtained from each subject. They were also reassured about their confidentiality, privacy and right to withdraw at any time. Participants were also informed about their right to withdraw from the study at anytime without giving a reason.

**-The screening phase:**

The researcher did screen for all menopausal women using tool II. The first 80 subject who diagnosed as moderate to severe menopausal symptom and meet the eligible criteria were included in the study. Then they were individually interviewed by the researcher to collect the basic data using (tool 1) and randomly assigned to either study (40) or control(40) group.

**The implementation phase :**

**-The study group:** each subject in the study group was individually met on the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> day, over the course of three successive week. For each subject the 9 acupressure session was individually conducted at the (LI-4 for hot flashes, headaches and bladder discomfort & SP-6 for irritability, depressed mood and thinking & HT7 for relieving Heart discomfort, insomnia and anxiety & TW 5 relieves muscle and joint pain)<sup>(14-16)</sup> point for 20 minutes per day. Then the severity of symptoms were assessed using MRS scale.

-In the first session, the researcher explains the general guideline of the study, then acupressure points, techniques and precautions to be taken before and after the implementation.

-Then the researcher stand at right side of the subject to locate acupressure points, then The pressure was applied in a slow rhythmic manner with the ball of fingers and rotated on 4 points simultaneously on both side of woman. The pressure alternating between 10 seconds continues, 5 seconds rest. The researcher repeated the same work in the next sessions.

**The control group:** was left to take their own routine care.

**Evaluation of the effectiveness of acupressure:**

Evaluation of the effectiveness of acupressure was measured for each women by re-assessing the severity of menopausal symptoms as well as their daily activities at the second and third weeks after acupressure sessions using tools II & III.

**Statistical analysis:**

Statistical analysis was performed using SPSS version 16.0 for windows. Frequency & percentage were used for describing and summarizing categorical

data. Monte Carlo test and Chi Square test \*significant at  $P \leq 0.05$  to compare between the severity of menopausal symptoms before and after intervention in between groups was done.

**3.Results**

Table (1) revealed that more than half of both study and control groups of menopausal women (57.50%, 52.50%, respectively) were in 50 years old or more. About one third (35.00%) of the study group had secondary school education or more, compared to 45.00% of the control group. Nearly two-thirds of both the study (62.50%) and control (70.00%) were married. About three quarter of both study and control groups (82.5% & 75% respectively) had children.

According to table (2) the majority of the study and control groups (70% & 80%, respectively) had moderate total score of physical menopausal symptoms before the intervention with no statistically significant difference between them. Two and three weeks after acupressure, there was a statistically significant difference ( $^{MC}P < 0.0001$ ) between the study and control groups in favor of the study group. Where the total score of physical symptoms were completely absent two and three weeks after intervention among 55% & 40% of study group compared to 5% & none respectively of the control group. Meanwhile, the 17.5% & 22.5% of control group had sever total score of physical symptoms compared to only non & 5% respectively among the study group after two and three weeks of intervention.

Table (3) donates the number and percent distribution of menopausal women according to the severity of each specific physical symptom over time. According to the used significant tests, there were no statistically significant differences between the study and control groups in all physical symptoms before intervention. After two and three weeks of acupressure, there was a statistically significant improvement in *all* physical symptoms in favor of the study group. 40% & 35% of study group had reported absence of vasomotor symptoms compared to only 5% & 5% respectively of the control group after two and three weeks of intervention. Non of the study subject reported sever heart discomfort compared to 22.5 % & 12.5% respectively of control group two and three weeks after intervention. The difference was statistically significant ( $^{MC}P < 0.0001$  &  $^{MC}P < 0.025$  respectively). Sleep problems were significantly ( $^{MC}P < 0.0001$ ) improved among the study group that reported as either absence or presence of mild among the majority (85% & 80%) of them compared to only 25% & 20% respectively of the control group after two and three weeks of intervention. Where, muscle and joint discomfort were absent among 45% & 32.5%

respectively of the study group compared to only non of the control group after two and three weeks of intervention the difference was statistically significant ( $^{MC}P < 0.0001$ ). In addition, there was a statistically significant ( $^{MC}P < 0.0001$ ) improvement in bladder symptoms that reported as absence among (37.5% & 20%) of the study compared to only non & 7.5% respectively of the control group two and three weeks after intervention.

Table (4) reflects the number and percent distribution of menopausal women according to the severity of total score of psychological menopausal symptom over time. It shows no statistically significant differences between the two groups in this respect before the intervention. Two and three weeks after the intervention, there was a statistically significant difference between the study and control groups in favor of the study group in all psychological symptoms. Where 55% & 45% of the study group had reported absent in their total psychological symptoms score compared to only 2.5% & 2.5% respectively of the control group had reported that.

Table (5) exhibits the number and percent distribution of menopausal women according to the severity of each specific psychological menopausal symptom over time. It shows no statistically significant differences between the study and control groups regarding each menopausal psychological symptoms before the intervention. Two weeks after the intervention, each psychological symptoms were more significantly improved among the study than the control group. Whereas, only 5%, 2.5%, 5% and non of the study group were still complaining from sever irritability, anxiety, depressive mood and lack of concentration/forgetfulness respectively compared to 27.5%, 17.5%, 22.5 and 17.5% of the control group, respectively. Three weeks after the intervention, there was a statistically significant difference between the study and control groups in favor of the study group in each menopausal psychological symptoms. Where only 10%, 7.5%, non and 5 % of the study group had

complained from sever irritability, anxiety, depressive mood and lack of concentration/forgetfulness respectively. While as much as 32.5%, 15%, 20% and 12.5% respectively of the control group had suffered from the same psychological symptoms.

Table (6) exhibits number and percent distribution of the study subjects according to the total scores of the effects of menopausal symptoms on their daily life activities over time. Before the intervention 75% & 65% of the study and control group respectively had a moderate total score of negative effect of menopausal symptoms on their daily life activities with no significant difference between them. Two and three weeks after intervention, there was a statistically significant difference ( $^{MC}P < 0.0001$ ) between the study and control groups in favor of the study group. Where, negative effect on daily life activities had completely absent in more than two fifths (45% & 42.5%) of the study group compared to non and 2.5% of the control group.

Table (7) portrays the number and percent distribution of the study subjects according to the specific effects of menopausal symptoms on their daily life activities over time. Before the intervention, both study and control groups had approximately equal moderate to sever effect of menopausal symptoms on their daily life activities. Two and three weeks after the intervention, there was a statistically significant difference between the study and control groups in favor of the study group. The sever effect on social life activities had completely absent among the study group compared to 27.5% & 17.5% respectively of the control group. Two and three weeks after intervention, negative effects on the subjects' job productivity were significantly absent among 37.5% & 32.5% of the study group than 2.5% & non respectively of the control group. The most significant improvement was observed in home responsibilities among around two-fifths (42.5% & 37.5% respectively) of the study group compared to only 2.5% & 5% respectively among the control group.

**Table (1): Number and percent distribution of the study subjects according to their general characteristic**

General characteristic	Study (n=40)		Control (n=40)		Significant test (p value)
	No.	%	No.	%	
<b>Age (years):</b>					$X^2=0.453$ $P=0.501$
<50	17	42.50	19	47.50	
≥50	23	57.50	21	52.50	
<b>Level of education:</b>					$X^2=1.227$ $P=0.541$
-read and write	14	35.00	13	32.50	
<< secondary school	12	30.00	9	22.50	
≥secondary school or more	14	35.00	18	45.00	
<b>Years of experience:</b>					$X^2=0.056$ $P=0.813$
<10	13	32.50	14	35.00	
≥ 10	27	67.50	26	65.00	
<b>Marital status:</b>					$X^2=1.261$ $P=0.532$
- Married	25	62.50	28	70.00	

- Widowed - Divorce	5 10	12.5 25.00	6 6	15.00 15.00	
Gravidity: 0 <2 ≥2	7 20 13	17.50 50.00 32.50	10 17 13	25.00 42.50 32.50	X <sup>2</sup> =1.952 P=0.377
Having children: - Yes - No	33 7	82.50 17.50	30 10	75.00 25.00	X <sup>2</sup> =0.672 P=0.412

X<sup>2</sup>: Chi-Square test \*significant at P≤0.05

**Table (2): Number and percent distribution of the study subjects (menopausal women) according to the severity of total physical menopausal symptoms score before and after intervention**

Severity of physical symptoms	Before intervention				After two week of intervention				After three week of intervention			
	Study (n=40)		Control (n=40)		Study (n=40)		Control (n=40)		Study (n=40)		Control (n=40)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Absent	0	0.0	0	0.0	22	55	2	5.0	16	40.0	0	0.0
Mild	0	0.0	0	0.0	10	25	4	10.0	15	37.5	7	17.5
Moderate	28	70.0	32	80.0	8	20	27	67.5	7	17.5	24	60.0
Sever	12	30.0	8	20.0	0	0.0	7	17.5	2	5.0	9	22.5
Significance (p value)	X <sup>2</sup> =0.480 P=0.488				MC P<0.0001*				MC P<0.0001*			

MC P: Monte Carlo test X<sup>2</sup>: Chi-Square test \*significant at P≤0.05

**Table (3) Number and percent distribution of the menopausal women according to the severity of each physical menopausal symptom over time.**

Severity of physical symptoms		Before intervention				(pvalue)	After two weeks of intervention				(p value)	After three weeks of intervention				(p value)
		Study (n=40)		Control (n=40)			Study (n=40)		Control (n=40)			Study (n=40)		Control (n=40)		
		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%	
vasomotor symptoms*	Absent	3	7.5	2	5.0	X <sup>2</sup> =4.300 P=0.231	16	40.0	2	5.0	MC P<0.001*	14	35.0	2	5.0	MC P<0.0001*
	Mild	2	5.0	5	12.5		17	42.5	10	25.0		18	45.0	6	15.0	
	Moderate	31	77.5	24	60.0		7	17.5	19	47.5		8	20.0	26	65.0	
	Severe	4	10.0	9	22.5		0	0.0	9	22.5		0	0.0	6	15.0	
Heart discomfort**	Absent	3	7.5	2	5.0	X <sup>2</sup> =1.600 P=0.659	20	50.0	2	5.0	MC P<0.001*	10	25.0	2	5.0	MC P<0.025*
	Mild	4	10.0	6	15.0		14	35.0	4	10.0		14	35.0	8	20.0	
	Moderate	28	70.0	24	60.0		6	15.0	25	62.5		16	40.0	25	62.5	
	Sever	5	12.5	8	20.0		0	0.0	9	22.5		0	0.0	5	12.5	
Sleep problems***	Absent	3	7.5	2	5.0	X <sup>2</sup> =0.757 P=0.860	15	37.5	3	7.5	MC P<0.001*	12	30.0	2	5.0	MC P<0.0001*
	Mild	5	12.5	7	17.5		19	47.5	7	17.5		20	50.0	6	15.0	
	Moderate	21	52.5	22	55.0		6	15.0	22	55.0		8	20.0	23	57.5	
	Sever	11	27.5	9	22.5		0	0.0	8	20.0		0	0.0	9	22.5	
muscle and joint discomfort****	Absent	0	0.0	0	0.0	X <sup>2</sup> =0.283 P=0.888	18	45.0	0	0.0	MC P<0.0001*	13	32.5	0	0.0	MC P<0.0001*
	Mild	6	15.0	6	15.0		11	27.5	4	10.0		16	40.0	11	27.5	
	Moderate	23	57.5	25	62.5		8	20.0	25	62.5		9	22.5	22	55.0	
	Sever	11	27.5	9	22.5		3	7.5	11	27.5		2	5.0	7	17.5	
Bladder problem	Absent	4	10.0	5	12.5	X <sup>2</sup> =2.346 P=0.504	15	37.5	0	0.0	MC P<0.0001*	8	20.0	3	7.5	MC P<0.0001*
	Mild	4	10.0	8	20.0		14	35.0	8	20.0		22	55.0	2	5.0	
	Moderate	25	62.5	23	57.5		11	27.5	24	60.0		8	20.0	26	65.0	
	Sever	7	17.5	4	10.0		0	0.0	8	20.0		2	5.0	9	22.5	

\* hot flashes and night sweats \*\* heart skipping, heart racing, tightness \*\*\* difficulty in falling asleep, waking up early \*\*\*\* pain in the joints MC P: Monte Carlo test X<sup>2</sup>: Chi-Square test \*significant at P≤0.05

**Table (4): Number and percent distribution of the study subjects according to the severity of total psychological menopausal symptoms score before and after intervention**

Severity of psychological symptoms	Before intervention				After two weeks of intervention				After three weeks of intervention			
	Study (n=40)		Control (n=40)		Study (n=40)		Control (n=40)		Study (n=40)		Control (n=40)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Absent	0	0.0	0	0.0	22	55.0	1	2.5	18	45.0	1	2.5
Mild	0	0.0	0	0.0	13	32.5	7	17.5	15	37.5	9	22.5
Moderate	28	70.0	31	77.5	5	12.5	23	57.5	5	12.5	23	57.5
Sever	12	30.0	9	22.5	0	0.0	9	22.5	2	5.0	7	17.5
Significance (p value)	X <sup>2</sup> =0.581 P=0.446				MC P<0.0001*				MC P<0.0001*			

MC P: Monte Carlo test X<sup>2</sup>: Chi-Square test \*significant at P≤0.05

**Table (5) Number and percent distribution of the study subjects according to the severity of each specific psychological menopausal symptom over time**

Severity of psychological symptoms		Before intervention				(p value )	After two weeks of intervention				(p value )	After three weeks of intervention				(p value )
		Study (n=40)		Control (n=40)			Study (n=40)		Control (n=40)			Study (n=40)		Control (n=40)		
		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%	
irritability	Absent	0	0.0	0	0.0	$X^2=0.937$ $P=0.626$	20	50.0	4	10.0	MC $P=0.0001^*$	21	52.5	0	0.0	MC $P<0.0001^*$
	Mild	4	10	7	17.5		14	35.0	7	17.5		7	17.5	7	17.5	
	Moderate	29	72.5	27	67.5		4	10.0	18	45.0		8	20.0	20	50.0	
	Sever	7	17.5	6	15.0		2	5.0	11	27.5		4	10.0	13	32.5	
Anxiety	Absent	0	0.0	0	0.0	$X^2=0.072$ $P=0.965$	17	42.5	1	2.5	MC $P=0.0001^*$	16	40.0	0	0.0	MC $P<0.0001^*$
	Mild	5	12.5	4	10		14	35.0	10	25.0		14	35.0	8	20.0	
	Moderate	24	60	27	67.5		8	20.0	22	55.0		7	17.5	26	65.0	
	Sever	11	27.5	9	22.5		1	2.5	7	17.5		3	7.5	6	15.0	
Depressive mood	Absent	1	2.5	0	0.0	$X^2=6.471$ $P=0.091$	16	40.0	1	2.5	MC $P<0.0001^*$	11	27.5	0	0.0	MC $P<0.0001^*$
	Mild	0	0.0	6	15		15	37.5	7	17.5		15	37.5	7	17.5	
	Moderate	25	62.5	18	45		7	17.5	23	57.5		14	35.0	25	62.5	
	Sever	14	35	16	40		2	5.0	9	22.5		0	0.0	8	20.0	
Lack of concentration/forgetfulness	Absent	1	2.5	3	7.5	$X^2=2.654$ $P=0.448$	18	45.0	2	5.0	MC $P<0.0001^*$	17	42.5	0	0.0	MC $P<0.0001^*$
	Mild	5	12.5	5	12.5		14	35.0	8	20.0		10	25.0	9	22.5	
	Moderate	23	57.5	26	65		8	20.0	23	57.5		11	27.5	26	65.0	
	Sever	11	27.5	6	15		0	0.0	7	17.5		2	5.0	5	12.5	

MC<sup>P</sup>: Monte Carlo test      X<sup>2</sup>: Chi-Square test      \*significant at P<0.05

**Table (6): Number and percent distribution of the study subjects according to the specific effects of total score of menopausal symptoms (MS) on their daily life activates over time**

Effect of MS on daily life activities	Before intervention				After two weeks of intervention				After three weeks of intervention			
	Study (n=40)		Control (n=40)		Study (n=40)		Control (n=40)		Study (n=40)		Control (n=40)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Absent	0	0.0	0	0.0	18	45.0	0	0.0	17	42.5	1	2.5
Mild	0	0.0	0	0.0	12	30.0	5	12.5	14	35.0	6	15.0
Moderate	30	75.0	26	65.0	7	17.5	24	60.0	7	17.5	24	60.0
Sever	10	25.0	14	35.0	3	7.5	11	27.5	2	5.0	9	22.5
Significance (p value )	$X^2=0.952$ $p=0.329$				MC $p < 0.0001^*$				MC $p < 0.0001^*$			

MC<sup>P</sup>: Monte Carlo test      X<sup>2</sup>: Chi-Square test      \*significant at p<0.05

**Table (7) Number and percent distribution of study subjects according to the specific effects of menopausal symptoms (MS) on their daily life activates over time**

Effect of MS on daily life activities		Before intervention				(p value )	After two weeks of intervention				(p value )	After three weeks of intervention				(P value )
		Study (n=40)		Control (n=40)			Study (n=40)		Control (n=40)			Study (n=40)		Control (n=40)		
		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%	
Job productivity	Absent	0	0.0	2	5.0	$X^2=2.915$ $P=0.405$	15	37.5	1	2.5	MC $P < 0.001^*$	13	32.5	0	0.0	MC $P < 0.0001^*$
	Mild	8	20.0	5	12.5		14	35.0	7	17.5		16	40.0	9	22.5	
	Moderate	23	57.5	22	55.0		9	22.5	20	50.0		9	22.5	21	52.5	
	Sever	9	22.5	11	27.5		2	5.0	12	30.0		2	5.0	10	25.0	
social life activities	Absent	0	0.0	1	2.5	$X^2=1.776$ $P=0.620$	15	37.5	2	5.0	MC $P < 0.0001^*$	17	42.5	3	7.5	MC $P < 0.001^*$
	Mild	6	15.0	6	15.0		10	25.0	7	17.5		13	32.5	7	17.5	
	Moderate	25	62.5	21	52.5		15	37.5	20	50.0		10	25	23	57.5	
	Sever	9	22.5	12	30.0		0	0.0	11	27.5		0	0	7	17.5	
home responsibilities	Absent	0	0.0	3	7.5	$X^2=3.910$ $P=0.271$	17	42.5	1	2.5	(p value )	15	37.5	2	5.0	MC $P < 0.001^*$
	Mild	6	15.0	6	15.0		12	30.0	8	20.0		14	35.0	6	15.0	
	Moderate	23	57.5	24	60.0		5	12.5	19	47.5		7	17.5	19	47.5	
	Sever	11	27.5	7	17.5		6	15.0	12	30.0		4	10	13	32.5	

MC<sup>P</sup>: Monte Carlo test      X<sup>2</sup>: Chi-Square test      \*significant at P<0.05

**4. Discussion**

Menopause is reflects a period of changing ovarian function. During this period a significant proportion of women experience some menopausal symptoms such as vasomotor symptoms, headaches,

urinary incontinence, sleep disturbances, mood disturbance and cognitive difficulty. These symptoms impact the lives of individual women, their families, their productivity, and their lives within their communities. Despite the effectiveness of HRT, many

women refuse or discontinue treatment due to concerns about an increased risk of cancer or other HRT-linked conditions. Accordingly, they restore to safer alternative therapies to relieve symptoms and improve quality of life. One of the areas of complementary and alternative therapy is acupressure while others had reported a limited scientific evidence about the effectiveness of it on relief of this symptoms.<sup>(8,17)</sup>

On investigating the physical menopausal symptoms among the study subjects the result of the present study revealed that *all* menopausal symptoms was significantly improved among the study than control group after two and three acupressure sessions. This result is congruent with Nedrow *et al.* (2006)<sup>(14)</sup> who found that acupressure was effective in the relief of menopausal hot flashes, sleep disturbances, and mood changes. While Zhou *et al.* (2011)<sup>(18)</sup> disagree with this result he mentioned that acupressure improved subjective measures of hot flash frequency, physical, and psychological symptoms; however, improvements were not consistent.

Vasomotor symptoms was significantly improved among the study than the control group after two and three weeks of intervention. This in line with Zhou *et al.* (2009)<sup>(18)</sup> he studied the efficacy of acupressure for vasomotor symptoms; and these show promising results. He added that auricular acupressure can be used as alternative treatments to relieve menopausal hot flashes for those bilaterally ovariectomized women who are unable or unwilling to receive HRT.

Concerning the effect of acupressure on heart discomfort and sleep problems among menopausal women two and three weeks after the intervention the result of this study are on line with, Nordio *et al.* (2008)<sup>(15)</sup> who found that acupressure is known to ameliorate insomnia and anxiety, when a specific wrist point is stimulated (HT 7 Shenmen). In addition Yen-Ying *et al.* (2011)<sup>(19)</sup> had mentioned that auricular acupressure leads to more cardiac parasympathetic and less cardiac sympathetic activity, which contributes to the improvement sleep among menopausal women. The total sleep duration and sleep efficiency were increased, and the sleep latency was shortened significantly.

On investigating the fatigue during menopausal period the result of the present study revealed that the majority of the study and control groups had moderate to severe fatigue before the intervention with no statistically significant difference between them. While there is a statistically significant improvement among the study than control group two and three weeks after acupressure sessions. This result was in line with the study that performed by Yao *et al.*

(2007)<sup>(20)</sup> they concluded that acupressure was effective in improving fatigue and reducing insomnia. Eun Jin *et al.* (2011)<sup>(8)</sup> also mentioned that pressing acupoints and massage can effectively improve clinical symptoms of the patient with chronic fatigue syndrome.

The result of the present study shows that muscle and joint discomfort among menopausal woman were significantly improved among the study than control group after two and three weeks of acupressure sessions. This result goes hand in hand with Manheimer *et al.* (2007)<sup>(21)</sup> who reported that, mechanical pressure, such as massage and acupressure, has been known to decrease tissue adhesion, promote relaxation, increase regional blood circulation and increase intramuscular temperature. Moreover Zhang *et al.* (2012)<sup>(22)</sup> mentioned that acupressure is feasible to be trained among postmenopausal women with knee osteoarthritis.

As regarding bladder problem, a sizable proportion of study group reported absence or presence of mild symptoms than control group two and three weeks after acupressure sessions. This results is supported by Alraek *et al.* (2002)<sup>(23)</sup> he mentioned that acupressure point significantly affects hot flashes, urinary excretion and sweating. It provide changes in calcitonin gene-related peptide, which is a very potent vasodilator.

The severity of all psychological symptom among the study subjects shows a statistically significant absent among study than control group two and three weeks after acupressure sessions. This results is in line with that of Woods *et al.* (2007)<sup>(24)</sup> who found that emotional tension can lead to physical ailments. Acupressure helps by releasing physical tension and re-opening the qi flow, which is prone to a balanced emotional state.

Before the program the majority of the study and control groups had moderate to severe psychological symptom with no statistically significant differences between them. While after two and three weeks from acupressure sessions a little number of the study than control group had complained from severe irritability, anxiety the difference was statistically significant. Recent study done by Cosse A (2013)<sup>(16)</sup> revealed that, acupressure helps to relieve: panic attacks, anxiety, post-traumatic stress disorder, depression, phobias, sorrow, worry... Acupressure is especially effective with menopausal women who suffering from physical, emotional, psychological symptoms. Acupressure helps to alleviate stress by working directly on the autonomic nervous system, which calms nervous tension and increases resistance to stress. It encourages a deep relaxation of the body which has a very positive impact on state of mind.

In the same issue, the severity of depressive mood and lack of concentration/forgetfulness were significantly improved among study than control group two and three weeks after acupressure sessions. This finding is in line with that of Cosse A(2013)<sup>(16)</sup> who found that acupressure stimulates the body's nature self-healing capabilities and helps alleviate physical and psychological dysfunctions such as: mood swings, lack of concentration and forgetfulness. She added that forgetfulness and depressed mood were associated with hot flashes and sleep symptoms. Consequently a significant improvement of hot flashes and sleep problems was associated with improvement depressive mood and lack of concentration/forgetfulness. Acupressure is essence for intertwined women body, mind, physical, psychological and emotional spheres.

Two and three weeks after acupressure, there was a statistically significant improvement in all daily activity among the study than control group. This finding is consistent with that of Sluijs *et al.* (2007)<sup>(25)</sup> who indicated that menopausal symptoms impact the lives of individual women, their families, their productivity, and their lives within their communities. While Cardini *et al.* (2010)<sup>(26)</sup> added that decreasing hot-flash and other menopausal symptoms bother and interfere with daily activities, and overall quality of life. He also mentioned that acupressure is an efficient mean to rebalance the daily life emotional turmoil of menopausal women that intern improve woman daily life activities.

## Conclusion and Recommendations

### Conclusion

The results clarified that before the intervention all study subjects had moderate to severe menopausal symptoms with no statistically significant difference between the study and control groups. Meanwhile, two and three weeks after acupressure sessions there was a statistically significant difference between the study and control groups in favor of the study group regarding the severity of physical and psychological menopausal symptoms. On the other hand a significant improvement on daily life activities was evident after two and three weeks among study than control group.

### Recommendations

- 1-Provide an extensive orientation program for nurses about complementary therapy for menopausal woman.
- 2-Menopause friendly clinic should be establish in Primary Health Care centers to promoting their health practice.
- 3-Brochure about acupressure and menopause should be developed.

- 4-Maternity hospital policies should encourage the concept of complementary therapy.
- 5-Further researches are needed to explore the effect of different complementary and alternative therapies for the treatment of menopausal symptoms.

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