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# To Assess the Effectiveness of Aroma Theraphy on Joint Pain and Quality of Life among Menopausal Women Attending BVV, Sangha's Akkanbalaga at Bagalkot

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**Abstract** **Original Research Article**

***Background of the Study*:** Joint pain and poor Quality of life are commonly seen problems among menopausal women, which usually impede in proper management of joint pain and also can create serious health issues if not treated properly. Interventions like Aromatherapy and psycho education are proven to be effective management for treating joint pain and to enhance Quality of life among menopausal women. Hence the investigator felt the need to evaluate the effectiveness Aromatherapy intervention and psycho education on joint pain control measures and Quality of life of menopausal women. ***Methods*:** This was quasi experimental study with one group of pre-test and post-test design with 50 subject selected through simple random sampling technique. Data was collected using self –made questionnaire and WHO Brief's Quality of life scale. Intervention (Aromatherapy)was administered for 20 minutes for 30days (3sessons bi weekly). Data were analyzed by using descriptive and inferential statistics in terms of frequency distribution, percentage, mean, mean percentage, Standard Deviation, paired 't' test and chi-square test. ***Results***: Findings related to comparison of pre –test and post-test Quality of life scores of menopausal women shows that, mean post-test joint pain score is significantly Lesser that mean post test joint pain score [t =16.01, p<0.001] and Mean post Quality of Life score is significantly greater then mean pre test Quality of life score. [t=9.802, p<0.001]. ***Conclusion*:** The study proved that intervention package [Aromatherapy] on joint pain scores and Quality of Life among socio demographic was effective, scientific, logical and cost effective strategy in managing the joint pain and in enhancing Quality of Life scores of menopausal women.

**Keywords:** Menopausal Women, Joint Pain, Quality of Life, Effectiveness, Interventions, and Socio –Demographic Variables.



## INTRODUCTION

Women are special for many reasons they are the most sensitive, caring and maternal people in the world. "Women is the one who feeds herself who covers all the needs in the household and who doesn't go around asking from other people. The age increase women will get so many problems at age of attainment of menopause the women will prone to have more problems in the joint pain, arthritis etc. [1]. Menopause: Permanent cessation of menstruation following the loss of ovarian activity. Age between 45 to 55 years old Menopause is an inevitable milestone in the reproductive life of every woman. Natural menopause occur when a women stops menstruation for one year. Menopause is derived from the Greek words "Menus" meaning month and 'pauses' meaning cessation. Menopause is the last menstrual flow of women's life. The year just before and just after the menopause itself are referred to as the 'climacteric'. During this period, ovaries start to produce lower levels of natural sex bromines such as estrogen and progesterone. The level of estrogen is only about one-tenth of the level found in premenopausal women. Progesterone is nearly absent in the menopausal women. It marks the permanent end of fertility [2]. The age of the menopause does not depend on the age of menarche, the type of menstrual cycle and the number of pregnancy. The menopause usually occurs 45-52 years. In India the

average age of menopause is still estimated as 48 years [2]. Menopause is a normal part of ageing for a woman and literally means "last period". It is generally considered to be complete when a woman has not had a period for one year. Menopause, often referred to as "the change of life", usually occurs between the ages of 45 and 55 years. Premature (early onset) menopause is when periods stop before the age of 40 years. Menopause occurs when the ovaries fail to produce enough hormones to stimulate the monthly growth of the endometrium, and periods stop permanently. The time frame from when symptoms first appear to when menopause occurs may be several years. This time frame is medically referred to as the climacteric or the peri menopause.

**Symptoms of Menopause**

hot flashes, Night sweats, Irregular periods, Mood changes, Breast soreness, Decreased libido, Vaginal dryness, sex more difficult, Headaches, Tingling extremities, Burning mouth, feeling of burning, tenderness, tingling, heat, or numbing in or around the mouth, Changes in taste, Fatigue, Bloating, Other digestive changes Muscle tension and aches Electric shock sensations Itchiness, Sleep disturbance ,Difficulty concentrating, Memory lapses, Thinning hair Brittle nails, Weight gain, Stress incontinence, Dizzy spells, Allergies Osteoporosis, Irregular heart beat, Body odor, Anxiety, Panic disorder.

**Joint Pain:**

Estrogen helps decrease inflammation and keeps the joints lubricated. As a result, some females experience joint pain as a result of decreased estrogen. During menopause joint pain affects many people as they get older and is also common among menopausal women. Aches, stiffness and swelling around the joint and sometimes warmth are typical symptoms of menopausal joint pain. These may be worse in the morning, improving as the day continues. Larger joints such as hips and knees experience higher impacts and are more prone to arthritis in menopausal women. Back, Hand and finger joints are also commonly affected. High impact exercise such as jogging can exacerbate the problem, although this is often eased with rest. Weight gain is a common problem faced after menopause. Joint pains cause limitation of mobility thus causing weight gain which further puts pressure on the affected joints. muscles. Most commonly, however, joint pain refers to arthritis or arthralgia, which is inflammation or pain from within the joint itself [7]. Joint discomfort is common and usually felt in the hands, feet, hips, knees, or spine. Pain may be constant or it can come and go. Sometimes the joint can feel stiff, achy, or sore. Some patients complain of a burning, throbbing, or "grating" sensation. In addition, the joint may feel stiff in the morning but loosen up and feel better with movement and activity. However, too much activity could make the pain worse. Joint pain may affect the function of the joint, and can limit a person's ability to do basic tasks. Severe joint pain can affect the quality of life. Treatment should focus not only on pain but also on the affected activities and function [7]. Estrogen is likely to play an important role in the onset of musculoskeletal aches and pains in the menopause. Estrogen affects your cartilage, which is the connective tissue in joints, as well as bone turnover so it can play a part in inflammation and pain [8]. The hormonal change influences the women's health. Due to this reduced estrogen and progesterone. Knee pain is another common form of pain experienced by adult over 50. Chronic knee pain often leads to functional impairment reducing quality of life like other treatment for chronic pain, conventional treatment for knee pain focus on symptom rather than underlying cause. Many older adults turn Joint pain is experienced by more than half of the women around the time of menopause. The cause of joint pain in menopausal women can be difficult to determine as period of menopause coincide with using incidence of chronic rheumatic condition such as Osteoarthritis prevalence of does appear to joint pain increase. Now day reduce joint pain women will go under [9].

**Aromatherapy:**

Aromatherapy is based on the usage of aromatic materials, including essential oils, and other aroma compounds, with claims for improving psychological or physical well-being [10]. Aromatherapy refers to the medicinal or therapeutic use of essential oil absorbed through skin essential oil which are derived from plants are used to treat illness as well as to enhance physical and psychological wellbeing. Although the use of distilled plant materials dates to medieval Persia the term aromatherapy was first used Rene Mac rice Gatte fosse in the early 20th century. In this 1937 book, aromatherapies', Gatte fosse claimed that herbal medicine could be used to treat virtually any element throughout the human organ system. Today aromatherapy is popular in the United States and around the world [11].

## MATERIALS AND METHODS

**Study Design**

A researcher's overall plan for obtaining answers to the research questions or for testing the research hypothesis is referred to as research design. The research design adopted for the present study is quasi-experimental one group pre-test post-test research design.

**Setting of the Study**: Present study was conducted at B.V.V. Sangha's Akkanabalaga, Bagalkot.

**Paeticipants:**

The present study consists of all the menopausal women who are in the age group of 45 to 60 years attending BBV Sangha's Akkanabalaga at Bagalkot and

who are met the inclusion criteria were selected as the sample for the study.

**Sample Size**

Sampleforthepresentstudyconsistsof50menopausalwomenwhoareintheagegroup of 45-60 years with mild to severe joint pain menopause women attending B.V.V. Sangha's Akkanabalaga, Bagalkot.

**Sampling Technique:** on Probability purposive sampling technique was used to select the sample for the present study.

## RESULTS

The collected information was organized and presented in 5 parts as follows:

**PART I**: Description of socio-demographic characteristics of menopausal women.

Percentagewise distribution of menopausal women according to their age group reveals that majority of the menopausal women (42%) were in the age group of 55-60 years, (30%) of them were in 50-54 of age group and 28% of them were at age group of 45-49 years. Their educational status reveals that most of the menopausal women (40%) had secondary education, 34 percent of them had graduate, 22 percent of them were had primary education, and remaining 4 percent of them had post graduate.

their occupation reveals that most of the post-menopausal women (68%) were house wives, 22 percent of them were doing professional employee, 9% of them were self-employ, and remaining 4 percent of them were pensioner. diet pattern reveals that most of the menopausal women (74%) were vegiterian,16 percent were mixed, and remaining 10 percent of them were non-vegetarian. marital status reveals that most of the menopausal women (78%) were married, 14 percent of them were widow and remaining 8% were un married. types of family reveals that most of the menopausal women (54%) were nuclear family, 44 percent of them were belongs to joint family and remaining 2% were belongs to extended. religion reveals that most of the menopausal women (94%) were belongs to Hindu, 6 percent of them were belongs to Muslim, and no one belongs to Christian and others group. family monthly income reveals that most of the menopausal women (62%) had their family monthly income Rs.10,000-15,000 and (26%) were belongs to the income between Rs.5001-Rs. 10,000, and no one belongs to the family monthly income below Rs. 5000.rnumber of children reveals that most of the menopausal women (46%) were having more than2 children, 26% of them were having 2 children, (1%) having 1 child and remaining (0%) percent of them were not having children. joint pain reveals that most of the menopausal women (44%) were having joint pain more than 3 years, (30%) having joint pain less than 3 years, (26%) of them were having 3 years children, **PART II:** Description of assessment of pre-test joint pain and Health-Related Quality of Life of menopausal women.

**PART 3:** Evaluation of the effectiveness of the aroma therapy on Menopausal Women.

**PART IV:** Testing of Hypothesis

**PART V**: Association between pre-test of joint pain and QOL of menopausal women and their selected socio demographic variables.

**Section - A: Assessment of aroma therapy on joint pain among menopausal women.**

**Table 5.1: Assessment levels of joint pain among menopausal women n=50**

| Level of joint pain | Range of Score | Frequency | Percentage |
|---|---|---|---|
| **Mild** | 1 – 3 | 9 | 18% |
| **Moderate** | 4 – 6 | 21 | 42% |
| **Severe** | 7-10 | 20 | 40% |

Findings related to pre-test assessment of joint pain among menopausal women shows that highest percent (42%) women were having moderate pain, (40 %) percent of them were having sever joint pain and (18%) were having mild pain.

Hence the above stated results clearly suggest that majority of the menopausal women were having moderate joint pain.

**Table 5.2: Assessment levels of joint pain among menopausal women n= 50**

| Level of joint pain | Range of Score | Frequency | Percentage |
|---|---|---|---|
| **Mild** | 1 – 3 | 25 | 50% |
| **Moderate** | 4 – 6 | 21 | 42% |
| **Severe** | 7 – 10 | 4 | 8% |

Findings related to assessment of aroma therapy on joint pain among menopausal women shows that highest percent (50%) women were having mild joint pain, (21%) of them were having moderate joint pain and (4%) were having severe joint pain.

Hence the above stated results clearly suggest that majority of the menopausal women were having mild joint pain after the aroma therapy.

**Section - B: Assessment of mean, SD of pre-test and post-test joint pain among menopausal women.**

**Table 5.3: Assessment Mean, SD of pre-test and post joint pain among menopausal women** n=50

| Variables | Mean | SD |
|---|---|---|
| **Pre-test** | 5.72 | 1.89 |
| **Post-test** | 3.82 | 1.79 |

Findings about the assessment of mean, SD of pre-test joint pain scores of menopausal women reveals that, the total mean of pre-test joint pain scores was 5.72 with SD 1.89. and post-test join pain scores was 3.82 with SD1.79

Categorization of the menopausal women on the basis of Quality of Life was done as follows: scores <45 poor Quality of Life, scores45-66fairQuality of Life, scores 67-88 good quality life, scores>89 excellent quality of life.

**Table 5.4: Assessment of level of Quality of Life among menopausal women n= 50**

| Level of Quality of Life | Range of Score | Frequency | Percentage |
|---|---|---|---|
| **Poor Quality of Life** | <45 | 0 | 0% |
| **Fair Quality of Life** | 45-66 | 0 | 0% |
| **Good Quality of Life** | 67-88 | 28 | 56% |
| **Excellent Quality of Life** | >89 | 22 | 44% |

Findings related to the Quality of Life depicts that most (56%) of menopausal women were having good Quality of Life and remaining 44% of them were having excellent Quality of Life.

**Section - D: Assessment of Mean, SD and mean percentage of pre test Quality-of-Life Scores of menopausal women.**

**Table 5.5: Assessment Mean, SD and mean percentage of pre test Quality-of-Life Scores of menopausal women. n=50**

| DOMAIN OF QOL | MAX SCORE | PRE-TEST SCORES | | |
|---|---|---|---|---|
| | | MEAN | SD | MEAN% |
| **OVER ALL QOL** | 10 | 3.63 | 0.73 | 36.3% |
| **PHYSICAL QOL** | 35 | 24.25 | 3.33 | 47.5% |
| **PSYCHOLOGICAL QOL** | 30 | 18.23 | 1.65 | 18.23% |
| **SOCIAL RELATIONSHIP'S** | 15 | 11.43 | 1.59 | 11.4% |
| **ENVIRONMENTAL HEALTH** | 40 | 27.05 | 3.12 | 27% |
| **GRANDTOTAL** | 130 | 84.84 | 10.42 | 65.26% |

Findings about the assessment of mean, SD of pre-test QOL scores of menopausal women reveals that, the total mean of pre-test QOL scores was 84.84 percent with SD 10.42.

**Part III: Evaluation of the effectiveness of the Aroma therapy Intervention on Menopausal Women.**

**Section A:**

Comparison of pre-test and post-test level of joint pain among menopausal women have mild joint pain. Menopausal women have moderate joint pain. In post-test the majority (50%) of menopausal women have mild joint pain and (42%) menopausal women have moderate joint pain, and (8%) menopausal women have severe joint pain.

The above stated results clearly suggest that of menopausal women had experienced reduction in joint pain in post Intervention assessment. Thus, the administration of intervention was helpful in reducing the level of joint pain.

**Section B: Comparison of pre-test and post-test level Quality of life among menopausal women.**

**Table 5.6: Comparison of pre-test and post test level of joint pain among.**

| Levels of pain | Pre test | | Post test | |
|---|---|---|---|---|
| | No. of respondents | Percentage | No. of respondents | Percentage |
| **Mild** | 9 | 18% | 25 | 50% |
| **Moderate** | 21 | 42% | 21 | 42% |
| **severe** | 20 | 40% | 4 | 8% |

Findings about the comparison of level of pre-test & post-test blood pressure scores of menopausal women shows that, in pre-test the majority (42%) of menopausal women have moderate joint pain and (40%) menopausal women have severe joint pain, and (18%) menopausal women have mild joint pain. Menopausal women have moderate joint pain. In post-test the majority (50%) of menopausal women have mild joint pain and (42%) menopausal women have moderate joint pain, and (8%) menopausal women have severe joint pain.

The above stated results clearly suggest that of menopausal women had experienced reduction in joint pain in post Intervention assessment. Thus, the administration of intervention was helpful in reducing the level of joint pain. The above stated results clearly suggest that of menopausal women had experienced reduction in joint pain in post Intervention assessment. Thus, the administration of intervention was helpful in reducing the level of joint pai.

**Section B: Comparison of pre-test and post-test level Quality of life among menopausal women**

**Table 5.6: Comparison of pre-test and post-test level Quality of life among menopausal women n=50**

| DOMAIN OF QOL | MAX SCORE | PRE-TEST SCORES | | | POST- TEST SCORES | | |
|---|---|---|---|---|---|---|---|
| | | MEAN | SD | MEAN% | MEAN | SD | MEAN% |
| OVER ALL QOL | 10 | 3.63 | 0.73 | 36.3% | 8.8 | 1.08 | 88% |
| PHYSICAL QOL | 35 | 24.25 | 3.33 | 69.1% | 27.84 | 3.03 | 79.5% |
| PSYCHOLOGICAL QOL | 30 | 18.23 | 1.65 | 60.7% | 19.48 | 2.17 | 64.9% |
| SOCIAL RELATIONSHIP | 15 | 11.43 | 1.59 | 76.2% | 12.74 | 1.38 | 73.2% |
| ENVIRONMENTAL HEALTH | 40 | 27.05 | 3.12 | 67% | 30.32 | 1.8 | 75.8% |
| GRANDTOTAL | 130 | 84.84 | 10.42 | 65.26% | 99.18 | 9.46 | 76.29% |

Findings about the assessment of mean, SD and mean percentage of pre-test and post- test health related Quality of Life Scores of menopausal reveals that, the total mean percentage of pre-test QOL scores was 65.26% with mean and SD 84.84±10.42 The total mean percentage of post-test Quality of Life scores was 76.29 percent with mean and SD 99.18±9.46.

**Section C: Effectiveness of the aroma therapy on joint pain among Menopausal Women.**

**Table 5.7: Effectiveness of the aroma therapy on joint pain among Menopausal Women n=50**

| Variable | Max. Score | Pre-test ($O_1$) | | Post-test ($O_2$) | | Effectiveness ($O_2$ -$O_1$) | |
|---|---|---|---|---|---|---|---|
| | | Mean± SD | Mean% | Mean± SD | Mean% | Mean± SD | Mean% |
| Level of joint pain | 10 | 5.72±1.8 | 57.2% | 3.82±1.89 | 38.2 | 1.9±0.09 | 19% |

Findings of the related to comparison of mean percentage of the joint pain scores of menopausal women in pre-test and post-test reveals a decrease of 19percent in the mean joint pain of the menopausal women after implementation of Intervention.

Hence as per the above results it is clear that, administration of Intervention has enhanced their decreased the joint pain.

**Section D: Effectiveness of Aroma therapy on Quality of Life of menopausal women.**

| VARIABLE | MAX SCORE | PRE-TEST | POST TEST | EFFECTIVENESS ($O_2$-$O_1$) |
|---|---|---|---|---|
| | | Mean±SD | Mean±SD | Mean±SD |
| Quality of life | 130 | 84.84±10.42 | 99.18±9.46 | 14.34±0.96 |

Findings of the related to comparison of mean percentage of the Quality-of-Life scores of post-menopausal women in pre-test and post-test reveals an increase of 14.34 percent in the mean Quality of Life scores is increased in the menopausal women after implementation of Intervention.

Hence as per the above results it is clear that, administration of Intervention has enhanced their Quality of Life effectively.

**Part IV:** Testing of Hypothesis.
**Section B:** Association between the post-test Quality of Life scores and socio-demographic variables of menopausal women.
**$H_3$**: There will be a significant association between pre-test scores of Quality of Life of menopausal women and their socio-demographic variables.

Hypothesis was tested using Chi-square test

**Table 5.11: Association between the pre-test Quality of Life scores of menopausal women and their socio-demographic variables n=50**

| SL. No | Socio-demographic and clinical variables | Df | Level of significance | Chi-square value | P, value | Significance |
|---|---|---|---|---|---|---|
| **1** | Age | 1 | 0.05 | 0.47 | 0.49 | NS |
| **2** | Educational status | 1 | 0.05 | 1.7 | 0.18 | NS |
| **3** | Occupation | 1 | 0.05 | 0.12 | 0.49 | NS |
| **4** | Diet pattern | 1 | 0.05 | 0.60 | 0.42 | NS |
| **5** | Marital status | 1 | 0.05 | 4.5 | 0. 3 | Significant |
| **6** | Types of family | 1 | 0.05 | 0.12 | 0.72 | NS |
| **7** | Religion | 1 | 0.05 | 5.1 | 0.23 | NS |
| **8** | Family monthly income | 1 | 0.05 | 0.03 | 0.86 | NS |
| **9** | Duration of joint pain | 1 | 0.05 | 0.08 | 1 | NS |
| **10** | Number of children | 1 | 0.05 | 0.04 | 0.6 | NS |

**Df- Degree of Freedom ***p<0.001 NS - Not significant**

Findings related to the association between pre-test health related Quality of Life scores of menopausal women with their selected socio-demographic variables reveals that religion is significant association found between Quality of-Life scores and remaining socio demographic are not significant found with socio-demographic variable. Hence '$H_3$'stated is rejected for socio demographic variables.

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