ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024

A Study to Assess the Effectiveness of Sesame Seeds in Improving Symptoms of Post-Menopausal Women. An Overview of True Experimental Study

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ABSTRACT:

Introduction: Menopausal can be exiting yet uncomfortable time in a women life. Which is treated natural supplements one of the foods for prevention menopausal symptoms are the sesame seeds. The aim of the present study to assess the effectiveness sesame seeds to improving post-menopausal symptoms among age between 55-65 years.

Research Methodology: A quantitative research approach with a True experimental design was adopted and conducted at Ariyankuppam, Puducherry. The Simple random sampling technique was used to study group 30 and 30 control group. The conceptual frame work selected for this study is Wiedenbach"s Helping Art of Clinical Nursing Theory (1964). Data was collected using self-structured questionnaires. Demographic variable, assessment of post-menopausal symptoms and clinical variables.

Results: The pretest mean score of symptoms in the study group was 26.30±5.74 and the posttest mean score of symptoms in the study group was 19.07±5.29. The mean difference score was 7.23. The calculated paired't' test value of t = 9.021 was statistically significant at $p<0.001$ level.

Conclusion: The level of menopausal symptoms was significantly reduced for study group after providing sesame powder.

Keywords: Post-menopausal, women, sesame seed, experimental study, symptoms.

INTRODUCTION:

Menopause is the permanent stop of menstruation for 12 months caused by oestrogen deficiency and is not connected with any pathology. The WHO average age of menopause is 45–55 years. **(10)** Most women have vasomotor symptoms. Menopause affects many regions of the body including urogenital, psychogenic and cardiovascular issues. (1) Common sign symptoms are hot and cold flashes, night sweats, weight gain, body discomfort, joint pain,

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vaginal dryness, sleep problems, mood changes, and thinning hair and dry skin.[11] The main health concerns of postmenopausal women include vasomotor symptoms, urogenital atrophy, osteoporosis, cardiovascular dis-ease, cancer, decreased cognitive function, and sexual problems. [4]

The plant sesame indicium a member of the pedalium family is the source of black sesame seeds. It is produced for both culinary and medicinal purposes. Black sesame seeds are valuable sources of polyphenolic compounds, antioxidants, micronutrients and wellness nitrogen. [8] Consuming a lot of sesame seeds will help people cure anaemia problems and regulate the appropriate growth of red blood cells. [9] Sesame is an unsaturated fat its real natural may moderate glucose levels. [2] A modified diet containing adequate amounts of calcium and vitamin D is one of the precautions that can be taken to prevent osteoporosis and osteoarthritis in postmenopausal women. Other measures include oestrogen hormone replacement therapy, calcium, vitamin D and other nutritive supplementation under proper medical supervision. [5]

MATERIALS AND METHODS

It is experimental study conducted in post-menopausal women. This study was conducted in in adopted area of (Ariyankuppam), Aarupadai Veedu Medical College and Hospital, Puducherry. The sample was selected using simple random technique .The sample size of the present study was 60 post-menopausal women 30 study group and 30 control group. The Inclusion criteria for the study were the participants' age 55-65 year, attained menopause naturally, willing to participate in this study, who can read, speak and understanding in Tamil. Exclusion Criteria for the study who are receiving hormone replacement therapy, any allergy of sesame seeds. Who are not available during data collection period.

Data Collection Procedure:

The ethical permission to conduct the study was obtained from IRC AND IEC and Formal written permission has been obtained from the Dean AVMC&H, Puducherry to conduct the study in Ariyankuppam community area. Informed written and oral consent was obtained from each participant who was taking part in this study. Pre-test data were collected by using self-structured questionnaires demographic variables, post-menopausal symptoms assessed in rating scale and biological sample was collected for both the groups. Study group consumption of 50 gm sesame seeds powder daily for 4 weeks. Control group not received any intervention. After 4week Post-test will be conducted using same questionnaire both group.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024

The tool was consists of three section such as A, B, C.

SECTION A:

It consists of demographic variables such as age, education, residence, occupation, marital status, per capita monthly income, types of family, religion, dietary pattern, age of menarche, and age at menopause.

SECTION B:

It It consists of 13 symptoms associated with Menopause symptoms such as joint pain, sleep patten, abdomen pain, headache, skin changes, hot flushes, palpation and fatigue, breathing difficulties, mood swings, vaginal dryness, Irritability and bladder problem of post-menopausal women**.**

SECTION C:

It consists of Clinical variables such as blood pressure, hemoglobin level, serum, Calcium and cholesterol level.

STATISTICS:

Demographic variable, selective symptoms before and after study and clinical parameters were analyzed frequency and percentage distribution before and after study. Paired t-Test - effectiveness of intervention package pre and post-test. Association- Chi-Square based analysis of effectiveness of sesame seeds.

RESULTS:

A total number of the post-menopausal women were 60 and the most of the post-menopausal women, 23(76.7%) study group and 21(70 control group were aged between 51 – 60 years, 11(36.7%) study group and 18(60%) control group were illiteracy, 30(100%) study group and control group were residing in urban area, 17(56.6%) study group and 23(76.7%) control group were unemployed, 24(80%) study group and 25(83.3%) control group were married, 12(40%) study group had per capita monthly income of between 1166 – 2253 (Lower Middle Class) & 16(53.4%) in the control group had per capita monthly income of <1166 (Lower class), 16(53.3%) study group and 19(63.3%) control group belonged to nuclear family, 23(76.7%) study group and 24(80%) control group were Hindus, 25(83.3%) study group and 27(90%) control group were non-vegetarian, 27(90%) study group and 22(73.3%) control group were aged between 11 – 15 years at the age of menarche and 15(50%) study group and 14(46.7%) were aged between 46 – 50 and 51 – 55 years at the age of menopause.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024

Table 1: Demographic variables of post-menopausal women.

n = 60(30+30)

Demographic Variables	Study		Control	
	F	%	F	%
Age of women				
51 – 60 years	23	76.7	21	70.0
61 – 70 years	7	23.3	9	30.0
Education				
Professional degree	-	-	-	-
Diploma	1	3.3	0	0
Higher secondary	6	20.0	0	0
Middle school	3	10.0	3	10.0
Primary school	9	30.0	9	30.0
Illiteracy	11	36.7	18	60.0
Residence				
Rural	-	-	-	-
Urban	30	100.0	30	100.0
Occupation				
Part-time employed	5	16.7	3	10.0
Employed	8	26.7	4	13.3
Unemployed	17	56.6	23	76.7
Marital status				
Unmarried	-	-	-	-
Married	24	80.0	25	83.3
Divorce	1	3.3	0	0
Widow	5	16.7	5	16.7
Per capita monthly income				
7770 and above (Upper class)	4	13.3	1	3.3
3808-7769 (Upper middle class)	1	3.3	0	0
2253-3808 (Middle class)	6	20.0	3	10.0
1166-2253 (Lower middle class)	12	40.0	10	33.3
<1166 (Lower class)	7	23.4	16	53.4

ISSN PRINT 2319 1775 Online 2320 7876

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Demographic Variables	Study		Control	
	F	%	F	%
Type of family				
Joint family	14	46.7	11	36.7
Nuclear family	16	53.3	19	63.3
Religion				
Hindu	23	76.7	24	80.0
Christian	7	23.3	5	16.7
Muslim	0	0	1	3.3
Others				
Dietary pattern				
Vegetarian	5	16.7	3	10.0
Non-vegetarian	25	83.3	27	90.0
Age of Menarche				
≤ 10 years	1	3.3	1	3.3
11-15 years	27	90.0	22	73.3
16 years and above	2	6.7	7	23.3
Age at menopause				
40-45 years	5	16.7	2	6.6
46-50 years	15	50.0	14	46.7
51-55 years	10	33.3	14	46.7
56 and above	-	-	-	-

Table 2: Pretest and posttest level of blood pressure of post-menopausal women in the both group.

n = 60(30+30)

Blood Pressure	Study Group				Control Group			
	Pretest		Post Test		Pretest		Post Test	
	F	%	F	%	F	%	F	%
Normal	17	56.7	27	90.0	23	76.6	29	96.7
High	7	23.3	1	3.3	5	16.7	1	3.3
Low	6	20.0	2	6.7	2	6.7	0	0

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024

Table 3: Pretest and posttest level of hemoglobin among post-menopausal women in the study and control group.

n=60(30+30)

Hemoglobin	Study Group				Control Group			
	Pretest		Post Test		Pretest		Post Test	
	F	%	F	%	F	%	F	%
Normal	2	6.7	10	33.3	15	50.0	27	90.0
Mild	11	36.6	16	53.4	13	43.3	3	10.0
Moderate	15	50.0	4	13.3	2	6.7	0	0
Severe	2	6.7	0	0	0	0	0	0
Very severe	-	-	-	-	-	-	-	-

Table 4: Pretest and posttest level of serum calcium among post-menopausal women in each group.

Serum Calcium	Study Group				Control Group			
	Pretest		Post Test		Pretest		Post Test	
	F	%	F	%	F	%	F	%
Normal	30	100.0	30	100.0	30	100.0	30	100.0
High	-	-	-	-	-	-	-	-
Low	-	-	-	-	-	-	-	-

Table 5: Pretest and posttest level of cholesterol among post-menopausal women in the study and control group.

n = 60(30+30)

Cholesterol	Study Group				Control Group			
	Pretest		Post Test		Pretest		Post Test	
	F	%	F	%	F	%	F	%
Normal	1	3.3	5	16.7	18	60.0	27	90.0
Intermediate	7	23.3	15	50.0	11	36.7	3	10.0
High	22	73.4	10	33.3	1	3.3	0	0

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024

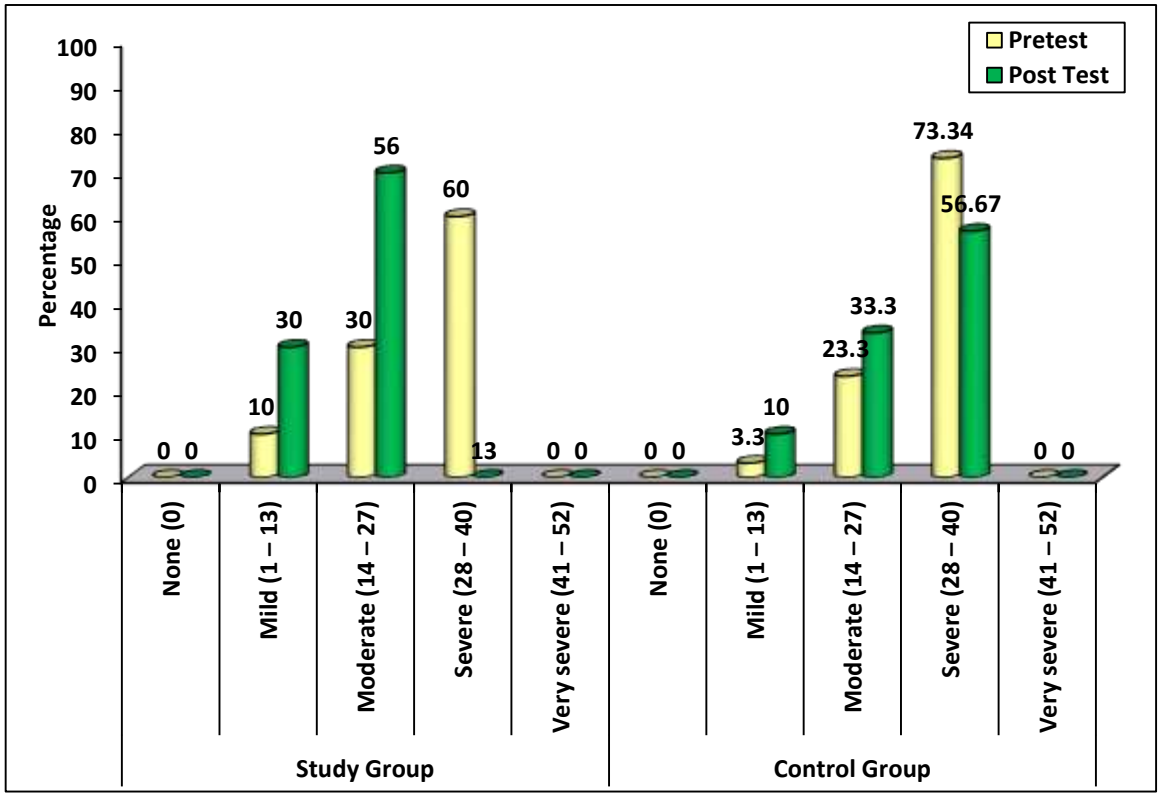

Figure 1: Bar diagram showed that before and after administering sesame powder level of symptoms

Association of Pretest Level of Symptoms Among Post-Menopausal Women with their Selected Demographic Variables in the Study Group:

The association of pretest level of symptoms among post-menopausal women with their selected demographic variables in the control group. The demographic variables education **(χ^2=10.812, p=0.029)**, occupation **(χ^2=10.085, p=0.039)** and per capital monthly income **(χ^2=14.201, p=0.027)** had shown statistically significant association with pretest level of level of symptoms among post-menopausal women in the control group at $p<0.05$ level and the other demographic variables had not shown statistically significant association with pretest level of symptoms among post-menopausal women in the control group.

DISCUSSION:

The pretest the study group, majority of post-menopausal had 18(60%) had severe post-menopausal symptoms 9(30%) had moderate post-menopausal symptoms and 3(10%) had mild post-menopausal symptoms. Independent‘t’ test value of t = 5.153 in the post test is statistically significant at $p<0.001$ level. **Akanksha Pande** Level of Menopausal Symptoms among Postmenopausal Women.70 (48.3%) moderate level4 (30.3%) severe level 31 (21.4%) mild level 0 (0%) very severe. [31] Assess the clinical variables the pretest of study group

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17(56.7%) had normal BP, 15(50%) had moderate HB, and 22(73.4%) had high cholesterol. **(6)**

The post-test 27(90%) had normal blood pressure, 4(13.3%) had moderate hemoglobin, 10(33.3%) had high cholesterol level. Supportive study randomized clinical trial, 98 postmenopausal women were included. The mean systolic ($p = 0.047$) and diastolic ($p = 0.015$) blood pressures changed increase in blood pressure. Significantly raised systolic ($p = 0.019$) and diastolic ($p = 0.001$) blood pressure among patients who had previously used calcium channel blockers. **(7)**

Association of pretest level of symptoms among post-menopausal women with their selected demographic variables in the study groupStudy **group**: The demographic variable per capita monthly income **(χ^2=15.833, p=0.045)** had shown statistically significant ,study group at $p<0.05$ level.**Control group**: The demographic variables education **($\chi^2$2=10.812, p=0.029),** occupation **($\chi^2$2=10.085, p=0.039)** and per capital monthly income **($\chi^2$2=14.201, p=0.027)** had shown statistically significant, control group at $p<0.05$ level. **Banskota N** Associations between Menopausal Symptoms with Demographic among Postmenopausal Women of Assam**.** Average age at menarche was 13.3±0.08 years, income $p<0.001$. **(3)**

CONCLUSION:

According to the findings of this research, menopausal women who consumed 50 gram of sesame seeds over the course of four weeks had a substantial reduction in their level of menopausal symptoms. So the sesame seeds have a substantial impact on reducing the level of Menopause symptoms among postmenopausal women.

RECOMMENDATIONS:

- Long-term studies with a significant group size are possible.
- A comparison study using experimental and control groups in rural and urban areas could be used to perform a similar study.
- A research can be performed to identify the frequency of menopausal symptoms in surgical menopause.
- The study can be conducted among all the post-menopausal womens

REFERENCE:

Journals:

1. Koothirezhi R., Ranganathan S. Postmenopausal Syndrome. [Treasure Island (FL): StatPearl Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper **© 2012 IJFANS. All Rights Reserved,** **UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024**

2. Ghoreishi A S., Chatrnour G., Mahmoodi M. The effect of sesame seeds on fast blood sugar, haemoglobin A1C, liver enzymes and lipid profile in patients with type 2 diabetes: a randomised clinical trial. Oct 2022(24).207-211. Available from: DOI- 10. 5114/fmpcr.2022.118279.

3. Banskota N., Mondal N. Associations between Menopausal Symptoms with Socio economic, Demographic and Lifestyle Variables among Postmenopausal Women of Assam, Northeast India. Online J Health Allied Scs. Aug 2022;21(4):3. Available from: https://www.ojhas.org/issue84/2022-4-3.html

4. Nazarpour S., Simbar M., Tehrani F M., Majd HA. Factors associated with quality of life of postmenopausal women living in Iran, 2020: 20:104 Available from: https://doi.org/10.1186/s12905-020-00960-4.

5. Ghosh D., Singha P S., Pratap P. Post-Menopausal Health of Indian Women: A Review. Current Women s Health Reviews, 2019 Nov (15) Available from: https:// doi.org 10.2174/1573404813666171201150725.

6. Pande A., Vahitha S., Sagili H. Assess the Level of Knowledge and Distribution of Menopausal Symptoms among Postmenopausal Women Attending Gynecology OPD in Jipmer, Puducherry, International Journal of Science and Research. 2018 (9), Available from: https://doi.org 10.21275/SR20415171144.

7. Alipoor B., Haghighian MK., Sadat BE., Asghari M. Effect of sesame seed on lipid profile and redox status in hyperlipidemic patients. Int J Food Sci Nutr. 2012 Sep;63(6):674 Available from: doi: 10.3109/09637486.2011.652077.

8. Health Benefits of Sesame Seeds, Article WebMD Editorial Contributors 2022 NOV. Available from: https://www.webmd.com/diet/health-benefits-sesame-seeds.

9. Sesame Seeds: Uses Benefits, Side Effects and More, 2022 Aug Available from https://pharmeasy.in/blog/ayurveda-uses-benefits-side-effects-of-sesame-seeds.

10. Menopause 17 October 2022, Available from https://www.who.int/news-room/fact-sheets/detail/menopause.

11. Symtoms of postmenopuse. Published 2021 July 21 Available from: https:// www.verywellhealth.com/kate-bracy-rn-np-2322627.

12. Singh N., Kumar D., Yadav G., Srivastava M K., Mishra S R., et.al. Comparison of Quality of Life and Bone Mass Density among Postmenopausal Women: A Cross-sectional Study. Oct 2020 1(4), 224–230. Available from https://doi.org/10.4103/ jmh.JMH_107_20 .

ISSN PRINT 2319 1775 Online 2320 7876

Research paper **© 2012 IJFANS. All Rights Reserved,** **UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024**

13. Téllez V C., Bonilla C M., OrtizLuna G., Sánchez., et al. Quality of Life and Menopause Internet. Quality of Life - Bio psychosocial Perspectives. Ntech Open; Oct 2020. Available from: http://dx.doi.org/10.5772/ intechopen.88983.

14. Nazarpour S., Simbar M., Tehrani F M., Majd HA. Factors associated with quality of life of postmenopausal women living in Iran, 2020: 20:104 Available from: https:// doi.org/10.1186/s12905-020-00960-4.

15. Singh N., Kumar D., Yadav G., Srivastava MK., Mishra SR., et.al. Comparison of Quality of Life and Bone Mass Density among Postmenopausal Women: A Cross-sectional Study. J Midlife Health. Oct-Dec 2020; 11 (4) 224-230. Available from: doi: 10.4103/jmh.JMH_107_20.

16. Ghosh D., Singha P S., Pratap P. Post-Menopausal Health of Indian Women: A Review. Current Women s Health Reviews, 2019 Nov (15) Available from: https://doi.org 10.2174/1573404813666171201150725.

17. Rathnayake N., Lenora J., Alwis G., Lekamwasam S. Prevalence and Severity of Menopausal Symptoms and the Quality of Life in Middle-aged Women: A Study from Sri Lanka. Jun 2019: 2081507. Available from: doi: 10.1155/2019/2081507.

18. Senthilvel S., Vasudevan S., Anju P S., Sukumaran A., Sureshbabu J. et.al. Assessment of Symptoms and Quality of Life among Postmenopausal Women in a Tertiary Care Hospital in Kochi, South India: A Hospital-based Descriptive Study. J Midlife Health. Oct-Dec 2018; 9(4):185-190. Available from: doi: 10.4103/jmh.JMH_98_18.

19. Chang C V., Cotterchio M., Boucher B A., Jenkins D J A., Mirea C et al. Effect of Dietary Flaxseed Intake on Circulating Sex Hormone Levels among Postmenopausal Women: A Randomized Controlled Intervention Trial, Nutrition and Cancer, Oct 2018: 71 (3): 385-398. Available from: DOI: 10.1080/01635581.2018.1516789.

20. Dehkordi H R., Mohammadi M., Moghtaderi F. Do sesame seed and its products affect body weight and composition, A systematic review and meta-analysis of controlled clinical trials. Journal of Functional Foods. October 2018, (49): 324-332. Available from: https://doi.org/10.1016/j.jff.2018.08.036.

Website:

21. Menopause Market Size, Share & Trends Analysis Report By Treatment, Dietary Supplements, OTC Pharma Products by Region (North America, Europe, APAC, Latin America, MEA), and Segment Forecasts, 2023 - 2030 Available from: https:// www.grandviewresearch.com/industry-analysis/ menopause-market.

22. A guide an Menopause WebMD Editorial Contributors, March 31, 2023 Available from: https://www.webmed.com/menopause/guide/menopause-basics.

ISSN PRINT 2319 1775 Online 2320 7876

Research paper UGC CARE Listed (Group -I) Journal Volume 13, S Iss 1, 2024

23. Menopause Facts and Statistics: What You Need to Know 2022, Menopause Facts and Statistics: What You Need to Know (verywellhealth.com).

24. Symtoms of postmenopuse. Published 2021 July 21 Available from: https:// www.verywellhealth.com/kate-bracy-rn-np-2322627.

25. Ostlund R. E., Jr (2004). Phytosterols and cholesterol metabolism. Current opinion in lipidology, 15(1), 37–41. https://doi.org/10.1097/00041433-200402000-00008.