

Effectiveness of Soya Beans Versus Diaphragmatic Breathing Exercise on Level of Menopausal Symptoms among Postmenopausal Women

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Abstract

The study was conducted to evaluate the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women. Quasi experimental design was adopted for the study. The structured interview questionnaire was developed to collect the data. The sample were selected by simple random sampling (lottery) method and data collection was carried out among 70 postmenopausal women in selected villages. Pretest was conducted with Modified Greene Climacteric Scale and Post test was conducted on 21st day. The findings revealed that the mean score level of menopausal symptoms among postmenopausal women in study group I was 39.25 in pre test and 36.34 in post test respectively. The paired 't' value of 1.69 which is significant at $p < 0.05$. It shows that soya beans was effective in reducing the menopausal symptoms. In study group II the mean score on level of menopausal symptoms among postmenopausal women was 36.71 in pre test and 29.62 in post test respectively. The estimated paired 't' value was 1.69 which was also significant at $p < 0.05$. In this study the investigator concluded that soya beans and diaphragmatic breathing exercise are effective in reducing menopausal symptoms, but diaphragmatic breathing exercise was more effective than soya beans.

Keywords: Effectiveness, diaphragmatic breathing exercise, soya beans, menopausal symptoms, postmenopausal women.

Introduction

Women experience various turning points in their life cycle, which may be development or transitional. Midlife is one such transitional period which brings about important changes in women⁹. Menopause is a unique stage of female reproductive life cycle, a transition from reproductive to non-reproductive stage. All women who live up to 50 years or more go through a period of transition from reproductive to non-reproductive stage of life⁸. Soy products contain isoflavones are part of a group of plant based chemicals called phytoestrogens. These chemicals act like a weaker form of estrogen in the body. The main isoflavones in soy are genistein and daidzein. When consuming soy, bacteria in your intestines break it down into its more active forms. Soy isoflavones bind to the same receptors as estrogen. Receptors are like docking stations on the surface of

cells. When isoflavones bind to some receptors, they mimic the effects of estrogen. When isoflavones mimic estrogen, they might help reduce hot flashes and other symptoms of menopause¹⁰. Diaphragmatic breathing, or deep breathing, is breathing that is done by contracting the diaphragm, a muscle located horizontally between the thoracic cavity and abdominal cavity. Air enters the lungs, the chest does not rise and the belly expands during this type of breathing. Diaphragmatic breathing is also known scientifically as eupnoea, which is a natural and relaxed form of breathing in all mammals¹⁰.

Statement of the Problem: A Quasi experimental study to compare the effectiveness of soya beans versus diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in selected villages at Kanyakumari district.

Objectives:

- To assess the pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.
- To evaluate the effectiveness of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women in study group I and study group II.
- To compare the effectiveness of Soya beans and Diaphragmatic breathing exercise on level of menopausal symptoms among post postmenopausal women in study group I and study group II.
- To find out the association between pretest level of menopausal symptoms among postmenopausal women with their selected demographic and clinical variables in study group I and study group II.

Hypotheses:

H₁: There is a significant difference between pre and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

H₂: There is a significant difference between posttest level of menopausal symptoms among postmenopausal women in study group I and study group II.

H₃: There is a significant association between pretest level of menopausal symptoms in study group I and study group II among postmenopausal women with their selected demographic and clinical variables.

Research Methodology

Research Approach: The investigator utilized quantitative research approach study

Research Design: Quasi experimental design was adopted for the study,

Research Setting: The study was conducted at villages, Kanyakumari district.

Population: The population under study constituted postmenopausal women with menopausal symptoms

Sample: Postmenopausal women with menopausal symptoms between the age group 40 to 60 years.

Sample Size: 70 postmenopausal women with menopausal symptoms.

Sampling Technique: Simple random sampling technique (lottery method).

Description of Tool: The tool used in the study consisted of three parts

Part I and Part II: Demographic and Clinical variables: In this part, structured questionnaire was used to collect the demographic variables such as age, education, occupation, marital status, type of family, dietary pattern, previous knowledge on soyabeans and diaphragmatic breathing exercise and the Clinical variables such as Body Mass Index, age at menarche, number of children, type of delivery, history of medical illness, under any treatment and duration of menopausal symptoms.

Part III: Modified Greene Climacteric Scale: Modified Greene Climacteric Scale was used to assess the level of menopausal symptoms among postmenopausal women. The total score was 66 and it was categorized as follows

Range Level of Menopausal Symptoms

0-22 Mild

23-44 Moderate

45-66 Severe

Method of Data Collection:

Phase I: Pretest: After obtaining formal permission from the Principal of St. Xavier's Catholic College of Nursing, Chunkankadai and the Block Medical Officer, Structured interview schedule was used to collect the demographic and clinical variables.

Pretest was conducted from the selected postmenopausal women with Modified Greene Climacteric Scale in study group I and study group II.

Phase II: Intervention: The investigator explained the postmenopausal women about the importance of soyabeans and diaphragmatic breathing exercise to reduce the menopausal symptoms. 50 gram of boiled soyabeans, once daily for 21 days before breakfast for 35 women in study group I and diaphragmatic breathing exercise twice a day for 21 days for 35 women in study group II.

Phase III: Post test: The post test was conducted on 21st day with Modified Greene Climacteric Scale. Analysis of the data was done by using descriptive and inferential statistics.

Results

Table 1: Comparison of mean SD and paired $\sim t$ value on pretest and posttest level of menopausal symptoms among postmenopausal women in study group I and study group II. N=70

S.No.	Group	Mean	SD	df	Paired $\sim t$ test
1	Study group I n=35 pretest	39.25	5.57	34	1.69
	post test	36.34	4.45		
2	Study group II n=35 pre test	36.71	9.64	34	1.69
	post test	29.62	4.47		

Significance at < 0.05

Table 2 Mean standard deviation and value of posttest level of menopausal symptoms of soya beans versus diaphragmatic breathing exercise in study group I and study group II N= 70

Variable	Study group-I n=35		Study group II n= 35		$\sim t$ value	Table Value
	Mean	SD	Mean	SD		
Level of menopausal symptoms during post test	35.48	4.54	29.62	4.47	4.57	2.776*

Significance at < 0.05

Discussion

The study is to compare the effectiveness of Soyabeans and Diaphragmatic breathing exercise on level of menopausal symptoms among postmenopausal women. Based on the data collected, the mean score on level of menopausal symptoms post test value was 35.48 in study group I and mean score in 29.62 post test in study group II . The unpaired' t' value is 2.77. It shows that Diaphragmatic breathing exercise is more effective in reducing the menopausal symptoms among postmenopausal women.

Conclusion

The study concluded that soya beans and diaphragmatic breathing exercise are effective in reducing menopausal symptoms, but diaphragmatic breathing exercise was more effective than soya beans.

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Source of Funding: Self

Ethical Clearence: The proposed study was conducted after the approval of the Dissertation Committee of St . Xaviers Catholic College of Nursing, Chunkankadai.

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