



EFFECTIVENESS OF LIFESTYLE EDUCATIONAL PROGRAM (LEP) USING ROSEN STOCK HEALTH BELIEF MODEL IN HEALTH PROMOTING BEHAVIORS AND MENOPAUSAL SYMPTOMS IN MENOPAUSAL WOMEN AT SELECTED RURAL AREAS OF BELAGAVI, KARNATAKA: A RANDOMIZED CONTROLLED STUDY- A PILOT PROJECT

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Abstract

Title: “Effectiveness of Lifestyle Educational Program (LEP) using Rosen stock Health Belief Model in Health Promoting Behaviors and Menopausal Symptoms in menopausal women at selected rural areas of Belagavi, Karnataka. -A Randomized Controlled Study”

Objectives of the study

- To assess the pretest scores of elderly women regarding Health Promoting Behaviors and Menopausal Symptoms in control and experimental group.
- To determine the effectiveness of lifestyle educational program (LEP) in health promoting behaviors and menopause symptoms in elderly women of experimental group as compared to control group at selected rural areas of Belagavi.
- To compare the experimental and control group with pretest and posttest scores of health promoting behaviors and menopausal symptoms.
- To find an association between selected demographic variables with health promoting behaviors and menopausal symptoms.

Methodology: Experimental study with pretest posttest control group design was used to conduct the study on 30 (15 in control group and 15 in experimental group) Elderly women residing at Rukmini Nagar Belagavi and Kinaye village of Belagavi, Karnataka. Simple Random Sampling technique was used to select the samples. Data was collected by using Menopause Rating Scale and Health Promotion Lifestyle Profile-II (HPLPII). The obtained data was analyzed by using descriptive and inferential statistics like frequency, percentage, and mean and standard deviation, chi square test.

Conclusion: The study results demonstrated the positive impact of lifestyle education program on health promoting behaviors and the mean scores have significantly increased in the postmenopausal women after intervention in the experimental group.

Mean scores of MRS before and after the intervention showed significant difference in the experimental group after the intervention. Menopausal symptoms were reduced in the experimental group compared to control group after intervention. No significant difference was found in this regard in the control group.

There was no statistically significant association was found between demographic variables of experimental group with post test scores of Health Promoting Lifestyle Profile II. And statistically significant association was found with income and source of information of experimental group with post test scores of Menopausal rating scale.

Keywords: Lifestyle Educational Program (LEP), Rosen stock Health Belief Model, Health Promoting Behaviors, Menopausal Symptoms, Menopausal women.

Introduction

Menopause is a natural physiological event. It should be recognized as a challenge for identified, prediction and presentation of organic disease in women during climatic and in postmenopausal years. Health personnel can identify and help the women to understand and adapt to the various changes taking place within her body. So that the women will be better equipped to face the changes and minimize the risks of this potentially disruptive period.¹

Menopause causes a wide range of symptoms, such as hot flushes, night sweats, aching in muscles and joints, sleeping problems, short breath, weight gain, increased facial hair, depression, irritability, anxiety, sexual problems, vaginal dryness, and urinary symptoms such as urine leakage while laughing and coughing. These symptoms decrease women’s health and affect their biological, psychological, and social health. In general, many postmenopausal women have low knowledge and practice about menopause transition issues, indicating the necessity to plan for interventions. Health promoting lifestyle education is one of the most important factors in raising postmenopausal women’s awareness and improving their performance to improve their health status. All the researches in the field of menopause have also emphasized education of and care for postmenopausal women to prevent their problems².

Menopause can have a significant effect on a women’s quality of life. Their health needs changes significantly and it is important that woman become aware of the new health risks. Studies revealed that women may avoid and reduce many adverse emotional and psychological symptoms of menopause by educating themselves to equip themselves when approaching this stage of



life cycle. Knowing more about menopause might empower women to cope better with menopausal changes. It has been suggested that lack of knowledge regarding menopause makes women more frightened when it is time to deal with menopause and this has negative effects on their emotional state. Changing women's perceptions on menopause by increasing their knowledge on menopause may cause less emotional disturbance.³

India has a large population – which has already crossed the 1 billion mark with 71 million people over 60 years of age and the number of menopausal women about 43 million. Average age of menopause is 47 years in Indian women with average life expectancy of 71 years. Therefore, Indian women are likely to spend almost 23.5 years that is one third of their total lives, in menopause⁴.

Menopause is emerging as a major health scourge in India with an alarming 18% of women in the 30-49 age groups attaining the non-reproductive age prematurely. Illiteracy among women young age marriages and early child bearing with poor nutritional levels have been cited as reasons for premature menopause, which might continue to be a burden in the future. According to a study conducted by the institute for social and economic changes 11% of Indian women of less than 40 years have attained menopause. The situation is grim in Andhra Pradesh (31.4%) Bihar (21.7%), Karnataka (20.2%) and Gujarat (19.9%). However, their counterparts in Kerala (11.6%), West Bengal (12.8%) and Rajasthan (13.1%)⁵.

In India, the data regarding postmenopausal symptoms and its management are fairly inadequate, and therefore, this group of health problems has mostly been neglected over the years, especially in South India. Hence, this pilot study was carried out to assess the Menopausal Symptoms and Health Promoting Behaviors among postmenopausal women of selected rural areas of Belagavi.

Objectives of The Study

1. To assess the pretest knowledge of elderly women regarding Health Promoting Behaviors and Menopausal Symptoms in control and experimental group.
2. To determine the effectiveness of lifestyle educational program (LEP) in health promoting behaviors and menopause symptoms in elderly women of experimental group as compared to control group at selected rural areas of Belagavi.
3. To compare the experimental and control group with pretest and posttest scores of health promoting behaviors and menopausal symptoms.
4. To find an association between selected demographic variables with health promoting behaviors and menopausal symptoms.

Materials and Methods

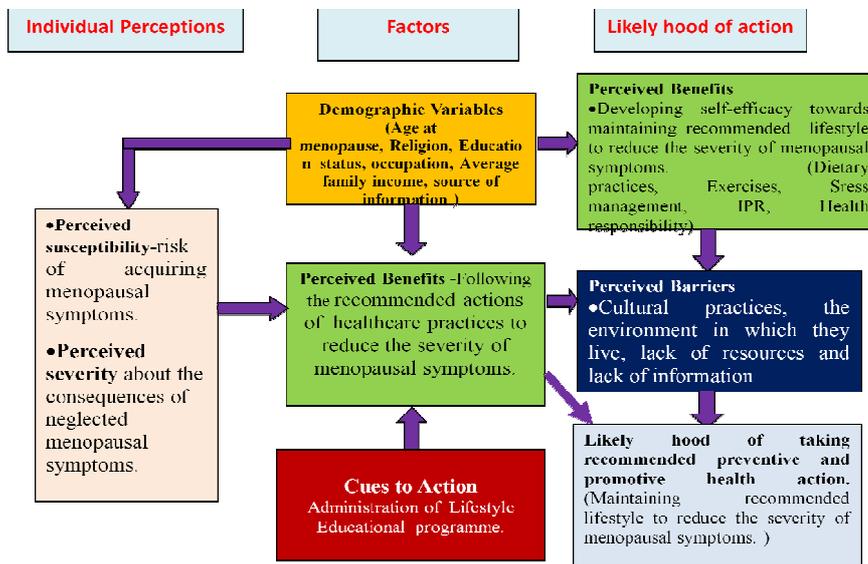
Experimental study with pretest posttest control group design was used to conduct the study. The main focus of the study was to assess the pretest knowledge of elderly women regarding Health Promoting Behaviors and Menopausal Symptoms in control and experimental group to determine the effectiveness of lifestyle educational program (LEP) in health promoting behaviors and menopause symptoms in elderly women of experimental group as compared to control group at selected rural areas of Belagavi, to compare the experimental and control group with pretest and posttest scores of health promoting behaviors and menopausal symptoms. And to find an association between selected demographic variables with health promoting behaviors and menopausal symptoms. The study was conducted on 30 (15 in control group and 15 in experimental group) elderly women residing at Rukmini Nagar Belagavi and Kinaye village of Belagavi, Karnataka. Simple Random Sampling technique was used to select the samples. The samples were selected according to the inclusion and exclusion criteria. Lifestyle modification program was prepared as per the Rosen stock health belief Model. Data was collected by using Menopause Rating Scale and Health Promotion Lifestyle Profile-II (HPLPII). The obtained data was analyzed by using descriptive and inferential statistics like frequency, percentage, and mean and standard deviation, chi square test.

Data collection procedure

- Ethical approval was obtained from the Institute Ethics Committee.
- Self-introduction of the investigator to the participants was done and explained the purpose of the study.
- Informed consent was taken from the study population.
- The study data was collected using a demographic questionnaire, Menopause Rating Scale (MRS), and Walker's HPLPII.
- Administered pre-test to know the severity of menopausal symptoms and health promoting behaviors.
- Lifestyle education programme was administered followed by the pretest on the same day in the experimental group.
- Posttest of the study was conducted after 30 days of lifestyle education programme in the experimental group and control group.
- All the 3 questionnaires were completed by face-to-face interview for all the samples.
- Data collected was tabulated and then analyzed.



Conceptual framework using Health Belief Model



Conceptual Framework Based on Health Belief Model
 (source: Rosenstoch's 1974 and Backer & Maimons's 1975 health belief model)

Results

Demographic Variables (control group)

No	Socio Demographic Variables	
1	Age at menopause	
	40-45 years	2
	46-50 years	3
	51-55 years	6
	56 years and above	4
2	Religion	
	Hindu	9
	Muslim	4
	Christian	2
	Other	-
3.	Education level	
	illiterate	2
	Primary education	4
	secondary education	5
	Pre university education	3
4	Occupation	
	working	5
	Non-working	10
5	Average family income	
	Below Rs 10.000	8
	10000-20000	4
	20.000 and above	3
6	Source of information	
	Health workers	3
	TV and social media	11
	Other	1



The socio demographic variables of the control group revealed that majority of women (6) belonged to the age group of 51-55 years, whereas 4 women belonged to the age group 56 years and above, 3 women belonged to the age group 46-50 years, and 2 women belonged to the age group 40-45 years. Majority of women (9) were Hindus, 4 were Muslims and 2 were Christians. Educational status of women revealed that majority of them had 5 secondary education 4 of them had Primary education, 3 of them had Pre university education, only one woman was graduate among them, and 1 was illiterate. Majority of women were housewives (10) and only 5 were working. 8 of them had average family income below 10,000 Rs per month, 4 of them had average family income of 10000-20000 Rs per month, and only 3 of them had average family income of Rs. 20.000 and above. Majority of the women (11) received information about management of menopausal symptoms from TV and social media, 3 of them had received information from Health workers, while only 1 woman received information from other sources.

Demographic Variables (experimental group)

No	Socio Demographic Variables	
1	Age at menopause	
	a.40-45 years	3
	b.46-50 years	9
	c.51-55 years	2
	d.56 years and above	1
2	Religion	
	a. Hindu	11
	b. Muslim	4
	c. Christian	-
	d. Other	-
3.	Education level	
	illiterate	3
	Primary education	3
	secondary education	8
	Pre university education	1
	Graduation and above	-
4	Occupation	
	working	4
	Non-working	11
5	Average family income	
	Below Rs 10.000	8
	10000-20000	5
	20.000 and above	2
6	Source of information	
	Health workers	5
	TV and social media	8
	Other	2

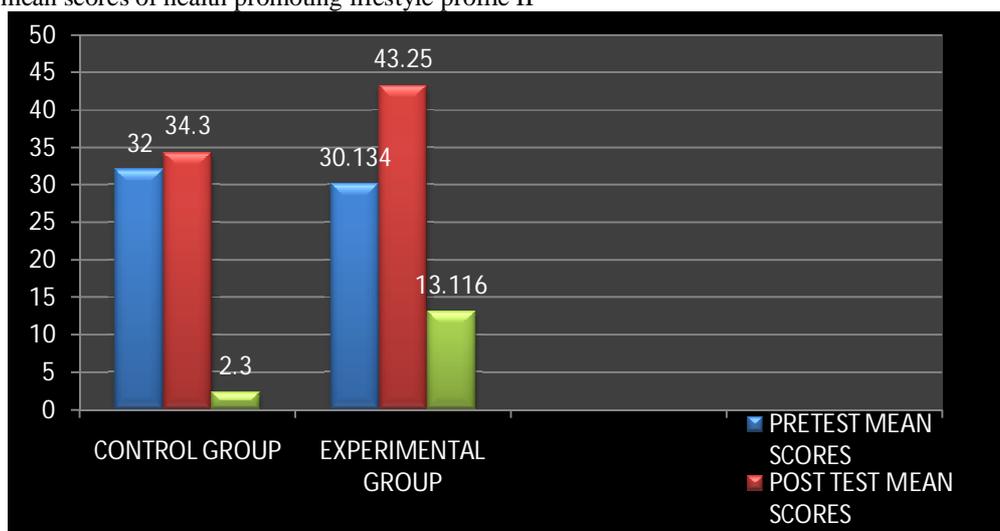
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Mean Scores of Health Promoting Lifestyle Profile II

Subscales	Mean scores of		mean Difference	Mean scores of		Mean Difference
	Pretest control group	Posttest control group		Pretest experimental group	Posttest experimental group	
Health Responsibility	31.44	33.88	2.44	31	43.88	12.88
Physical Activity	31.875	33.375	1.5	28.25	43.62	15.37
Nutrition	31.44	32.88	1.44	30.66	42.22	11.56
Spiritual Growth	29.666	34.66	4.99	27.66	43.55	15.89
Interpersonal Relations	34.88	35.55	0.67	31.11	44.44	13.33
Stress Management	31.125	33.625	2.5	29.5	43.75	14.25
Total	32	34.30	2.3	30.134	43.25	13.116

Graph 1: showing mean scores of health promoting lifestyle profile II



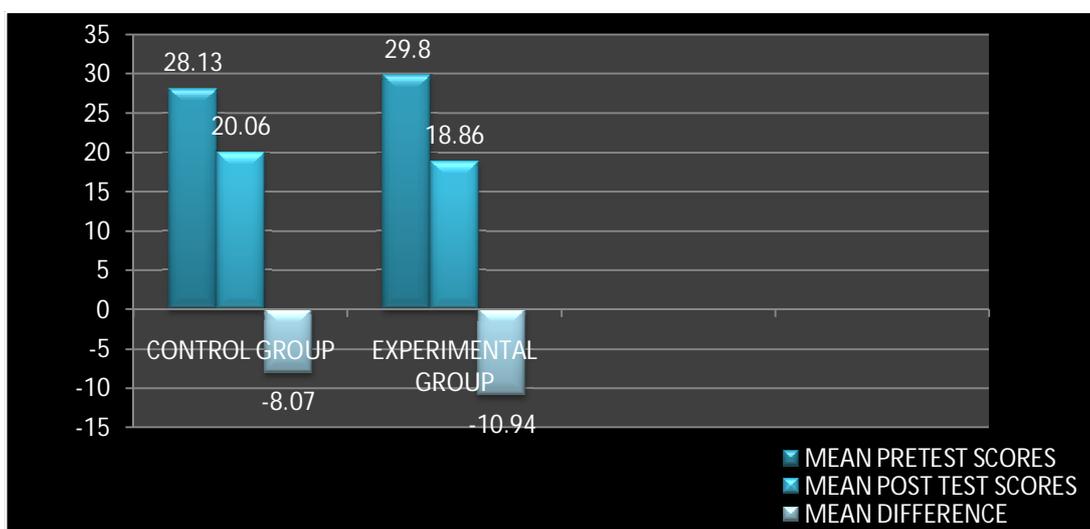
The study results demonstrated the positive impact of lifestyle education on health promoting behaviors and the mean scores have significantly increased in the postmenopausal women after intervention in the experimental group.

HPLPII contains 52 items and six subscales to measure the frequency of health-promoting behaviors. Health-promoting behaviors are measured in 6 domains of health-promoting lifestyle; i.e., health responsibility, physical activity, nutrition, spiritual growth, interpersonal relations, and stress management. These items are scored based on a 4-point Likert scale with four possible responses: 1 (never), 2 (sometimes), 3 (often), and 4 (routinely). The total score of health-promoting lifestyle is obtained by calculating the mean of responses to all the 52 items. In addition, the total score of each subscale is computed by calculating the mean of responses to that subscale's items. A significant difference was observed in this respect after the intervention.



Mean Scores of Menopause Rating Scale

Dimensions	Mean scores of		Mean Difference	Mean scores of		Mean Difference
	Pretest control group	Posttest control group		Pretest experimental group	Posttest experimental group	
Psychological Symptoms	37.25	34.5	-2.75	41	26.5	-14.5
Somatovegetative Symptoms	35.75	34	-1.75	42	27.5	-14.5
Urogenital Symptoms	43.33	40	-3.33	38	21.33	-16.67
Total scores	28.13	20.06	-8.07	29.8	18.86	- 10.94



Mean scores of MRS before and after the intervention showed significant difference in the experimental group after the intervention. Menopausal symptoms were reduced in the experimental group compared to control group after intervention.

Association Between Selected Demographic Variables with Post Test Scores of Health Promoting Behaviors and Menopausal Symptoms.

Demographic Variables / Domains	HR	PA	N	SG	IPR	SM	Chi-square Calculated Value	Chi-square Table Value
Age								
40-45 years	9.9	10.8	4.2	11.4	10.3	9.3	29.92 p=0.012 df=15	7.26
45-50 years	19.6	16.3	33.6	22.45	18.7	21.7		
51-55 years	9.3	12.3	2.9	6.9	4.8	8.2		
56 years & above	5.08	4.2	1.5	2.8	10.6	4.5		
Religion								
Hindu	29.9	33.4	24.4	29.7	31.7	36.6	8.017 p=0.155 df=5	1.15
Muslim	13.9	10.2	17.8	13.8	12.6	7.1		
Christian	-	-	-	-	-	-		
Others	-	-	-	-	-	-		
Educational Status								
Illiterate	8.7	4.8	10.7	7.3	9.3	10.3	15.72 p=0.400 df=15	7.26
Primary Education	8.9	12.4	4.52	10.5	5.6	8.7		
Sec Education	21.6	25.2	19.6	20.9	24.7	20.8		



PUC	4.6	0.18	7.4	4.8	4.8	3.9		
Degree & Above	-	-	-	-	-	-		
Occupation								
Working	7.09	11.8	12.9	16.3	6.8	12.9	8.65 p=0.123 df=5	1.15
Not working	36.7	31.8	29.3	27	37.6	30.8		
Income								
Below 10,000	16.9	17.1	10.7	19.2	18.3	20.2	17.5 p=0.06 df=10	3.9
10,000-20,000	13.7	18.4	18.3	18.8	23.3	17.3		
20,000 & Above	13.8	8.11	13.2	5.5	2.8	6.2		
Source of Information								
Health Workers	12.7	8.2	8.9	12	13.4	12.2	17.1 p=0.07 df=10	3.9
TV & SM	23.8	28.2	30.2	29	18.7	20.8		
Others	7.3	7.2	3.12	2.5	12.3	10.7		

All the chi square table values were less than calculated value so there was no statistically significant association found between demographic variables of experimental group with post test scores of Health Promoting Lifestyle Profile II.

Association Between Socio Demographic Variables and Post Test Scores of MRS

Demographic Variables / Domains	psychological symptoms	Somato vegetative symptoms	Urogenital symptoms	Chi-square Calculated Value	Chi-square Table Value
Age					
40-45 years	8.7	2.2	6.8	7.42 p=0.28 df=6	1.64
45-50 years	12.9	14.2	7.6		
51-55 years	2.8	7.3	4.6		
56 years & above	2.1	3.8	2.3		
Religion					
Hindu	18.7	18.2	18.7	3.12 p=0.209 df=2	0.103
Muslim	7.8	9.3	2.6		
Christian	-	-	-		
Others	-	-	-		
Educational Status					
Illiterate	9	5.3	4.7	3.54 p=0.71 df=6	1.64
Primary Education	3.5	8.2	4.7		
Sec Education	11.8	12.8	9.8		
PUC	2.2	1.2	2.1		
Degree & Above	-	-	-		
Occupation					
Working	10.3	7.7	5.03	1.43 p=0.48 df=2	0.103
Not working	16.2	19.8	16.3		
Income					
Below 10,000	11.9	13.8	9.8	0.47 p=0.97 df=4	0.711
10,000-20,000	9.8	9.3	6.7		
20,000 & Above	4.8	4.4	4.8		
Source of Information					
Health Workers	7.4	6.9	5.6	0.31 p=0.98 df=4	0.711
TV & SM	13.8	15.7	10.8		
Others	5.3	4.9	4.9		



The chi square table values of age, religion, education status occupation were less than calculated value so there was no statistically significant association found and The chi square table values of Income and source of information were more than the calculated value, Hence there was statistically significant association was found with income and source of information of experimental group with post test scores of Menopausal rating scale.

Conclusion

The study results demonstrated the positive impact of lifestyle education program on health promoting behaviors and menopausal symptoms, thus it can be used as an effective intervention tool for promoting health behaviours and for reducing menopausal symptoms in menopausal women.

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