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ORIGINAL ARTICLE **OPEN ACCESS**

Effectiveness of Lifestyle Educational Program (Lep) In Health Promoting Behaviors in Elderly Women Of Belagavi, Karnataka

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ABSTRACT
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. The aims of the study were to assess the pretest scores of elderly women regarding Health Promoting Behaviors in control and experimental group, to determine the effectiveness of lifestyle educational program (LEP) on health promoting behaviors 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 to find an association between selected demographic variables with health promoting behaviors. The study was conducted among 328 women experiencing physiological menopause residing at Vantamuri and Kinaye villages of Belagavi, Karnataka. Experimental study with pretest posttest control group design was used. Samples were selected by using Simple Random Sampling technique. Data was collected through face to face structured interview schedule by using demographic questionnaire, Health Promotion Lifestyle Profile-II.Pre-test was administered to assess the health promoting behaviors in both experimental and control group. Lifestyle education programme was administered followed by the pre test in the experimental group. Post test was conducted after 3 months of lifestyle education programme in both the group. The study results demonstrated the positive impact of lifestyle education programme in improving Health Promoting Behaviors significantly in Elderly Women. Mean scores have significantly increased in the menopausal women after intervention in the experimental group. Lifestyle educational programme can be used largely for improving health promoting behaviors in menopausal women.
Key words: *Menopause, Menopausal Symptoms, Elderly Women, Lifestyle Educational Program, Health Promoting Behaviors*

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INTRODUCTION

Women are anticipated to experience menopause for a substantial percentage of their lives due to the rising life expectancy around the world. If these women are not questioned about these symptoms, tested viable therapies for common symptoms and proven prevention techniques against major dangers may go unutilized in our population [1].

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 [2].

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 menopause [3].

Menopause is emerging as a major health scourge in India with an alarming 18% of women in the 30-49 age groups attaining the no 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. A research by the Institute for Social and Economic Changes claims that 11% of Indian women under 40 have experienced 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%) [4].

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 study was carried out to assess the Health Promoting Behaviors among postmenopausal women of selected rural areas of Belagavi.

Objectives of the Study

- To compare the results of the control and experimental groups' pre-test scores on health-promoting behaviors among older women.
- To ascertain if the lifestyle educational programme (LEP) in selected rural districts of Belagavi was beneficial in encouraging healthy habits in older women.
- To compare the pre and post-test results of health-promoting behaviors in the experimental and control groups.
- To find an association between selected demographic variables with health promoting behaviors.

MATERIAL AND METHODS

Research Design: Experimental study with pretest posttest control group design.

Research Setting: Vantamuri and Kinaye villages of Belagavi, Karnataka

Population: Elderly women residing in selected rural areas of Belagavi, Karnataka

Data collection Instrument: The study data was collected using a demographic questionnaire, and Walker's HPLPII (Modified Health Promotion Lifestyle Profile-II)

Method of data collection: face-to-face interview

Variables

Independent variables: Sociodemographic variables

Dependent variables: Health promoting behaviours

Sample size: 328 Elderly women

Sampling technique: Simple Random Sampling technique.

Inclusion Criteria

The study's inclusion criteria included being between the ages of 45 and 60, going through physiological menopause, having gone at least one year and up to ten years without a menstrual period, being in good physical and mental health, and being willing to take part in the study.

Exclusion Criteria

The exclusion criteria were having a history of hormone therapy within the past 6 months and having a history of hysterectomy, radiation therapy, use of drugs that reduce menopause symptoms, and failure to participate in training session.

Assumptions:

1. Elderly women will have some knowledge regarding health-promoting behaviors which helps in managing menopausal symptoms.
2. Lifestyle Education Program (LEP) promotes elderly women's actions regarding their health and wellbeing.

RESULTS

The findings of the study were presented under the following headings.

Frequency and percentage distribution of the demographic variables of elderly women in Experimental and control Group

According to their age in experimental group, majority 72(43.9%) were 51-55 years of age, and in control group maximum 76(46.3%) were in 46-50 years of age. Regarding religion of elderly women in experimental and control group, maximum were belongs to Hindu religion 145(88.4%),136(83%) respectively. With regard to education level of elderly women in experimental group, majority 62(37.8%) were illiterates. In control group majority of them 59(36%) had primary education. According to average family income of elderly women majority of them had income of Rs 10,000-20,000,i.e87(53%) , 76(46.3%) respectively in experimental group and control group .with regard to source of information of elderly women majority of them had information from TV and social media, both in experimental and control group, 94(57.3%) , 110(67.1%) respectively.

Table 1: Distribution of pre-test and post-test health promoting behaviors among elderly women in experimental group and control group [N=328]

Health promoting behaviors	Experimental Group (n=164)				Control Group (n=164)			
	Pre-test		Post-test		Pre-test		Post-test	
	f	%	f	%	f	%	f	%
Poor	30	18.2	0	0	24	14.6	7	4.3
Moderate	118	72	11	6.7	113	68.9	111	67.7
Good	16	9.8	116	70.7	27	16.5	46	28
Excellent	0	0	37	22.6	0	0	0	0

In experimental group during pretest majority 118(72%) had moderate health promoting behaviors, 30(18.2%) had poor health promoting behaviors and 16(9.8%) had good health promoting behaviors where as in posttest maximum 116(70.7%) had good health promoting behaviors, 37(22.6%) had excellent health promoting behaviors and 11(6.7%) had moderate health promoting behaviors.

Table 2: Comparison of pre-test and post-test scores of health promoting behaviors among elderly women in experimental group and control group [N=164]

Comparison	Pre-test		Post-test		Mean Diff.	t value	df	p value
	Mean	SD	Mean	SD				
Experimental group	107.37	17.68	154.84	17.92	47.47	27.91	163	**0.0001***
Control group	109.43	18.84	119.44	19.94	10.01	8.912	163	**0.001***

***P<0.05 level of significance NS-Non significance**

Paired t test was performed to compare the pre-test and post-test scores of health promoting behaviors among elderly women in experimental group and control group.

Results in experimental group showed that mean pretest score was 107.37± 17.68 and in posttest was 154.84±17.92 with mean difference of 47.47 with obtained (t=27.91, df=163, p=0.001) was found statistically highly significant.

In control group results showed that showed that mean pretest score was 109.43± 18.84 and in posttest was 119.44±19.94 with mean difference of 10.01 with obtained (t=8.912, df=163, p=0.001) was found statistically highly significant.

Table 3: Effectiveness of lifestyle educational program (LEP) on health promoting behaviors in elderly women of experimental group as compared to control group[N=328]

Comparison	Experimental group		Control group		Mean Diff.	t value	df	p value
	Mean	SD	Mean	SD				
Health promoting behaviors								
Pre-test	107.37	17.68	109.43	18.84	2.05	1.018	326	**0.309^{NS}**
Post-test	154.84	17.92	119.4	19.94	35.39	16.90	326	**0.0001***

Results regarding health promoting behaviors in pretest mean score in experimental group was 107.37±17.68 and in control group was 109.43±18.84 with mean difference of 2.05 with obtained (t=1.018, df=326, p=0.001) was found statistically non significant.

During posttest mean score in experimental group was 107.37±17.68 and in control group was 109.43±18.84 with mean difference of 2.05 with obtained (t=1.018, df=326, p=0.309) was found statistically highly significant.

Table 4: Comparison of components of pre-test and post-test scores of health promoting behaviors among elderly women in experimental group and control group

Groups	Variables	Comparison	Mean	SD	Mean Diff.	t value	p value
Experimental Group	Health responsibility	Pretest	17.07	4.32	8.05	21.08	0.001*
		Posttest	25.13	5.04			
	Physical activity	Pretest	13.44	3.62	8.48	17.88	0.001*
		Posttest	21.93	5.70			
	Nutrition	Pretest	21.09	5.02	6.74	19.42	0.001*
		Posttest	27.83	3.68			
	Spiritual growth	Pretest	18.94	5.10	8.48	19.70	0.001*
		Posttest	27.43	3.38			

	Interpersonal relations	**Pretest**	19.46	5.18	8.29	16.89	0.001*
		Posttest	27.75	5.29			
	Stress management	**Pretest**	17.38	5.38	7.20	18.92	0.001*
		Posttest	24.59	3.27			
Control Group	**Health responsibility**	**Pretest**	17.52	4.49	1.78	5.810	0.001*
		Posttest	19.30	4.73			
	Physical activity	**Pretest**	13.16	3.68	1.98	7.147	0.001*
		Posttest	15.15	4.20			
	Nutrition	**Pretest**	20.86	5.29	1.26	6.003	0.001*
		Posttest	22.12	5.18			
	Spiritual growth	**Pretest**	20.17	4.11	1.37	6.216	0.001*
		Posttest	21.54	4.40			
	Interpersonal relations	**Pretest**	20.16	4.64	1.84	6.254	0.001*
		Posttest	22.01	5.28			
	Stress management	**Pretest**	17.21	3.59	1.79	8.324	0.001*
		Posttest	19.01	3.83			

Significant mean difference was found in the posttest scores in each component of health promoting behaviors which showcases the impact of lifestyle Educational program.

Table 5: Comparison of components of post-test scores of health promoting behaviors among elderly women between experimental group and control group

Post-test Components of health promoting behaviors	**Experimental group**		**Control group**		**Mean Diff.**	**t value**	**df**	**p value**
	Mean	**SD**	**Mean**	**SD**				
Health responsibility	25.13	5.04	19.30	4.73	5.82	10.78	326	**0.001***
Physical activity	21.96	5.70	15.15	4.20	6.81	12.30	326	**0.001***
Nutrition	27.82	3.69	22.12	5.18	5.70	11.44	326	**0.001***
Spiritual growth	27.46	3.36	21.54	4.40	5.91	13.64	326	**0.001***
Interpersonal relations	27.72	5.29	22.01	5.28	5.71	9.771	326	**0.001***
Stress management	24.58	3.28	19.01	3.83	5.56	14.08	326	**0.001***

Independent t test was applied to compare the components of post-test scores of health promoting behaviors among elderly women between experimental group and control group. According to all the components of health promoting behaviors of elderly women in experimental group mean score was high compared to the control group so it was found highly significant.

Table 6: Association between pre-test health promotion behaviors among elderly women with their selected demographic variables in experimental group

Socio Demographic Variables	**Health promotion behavior**			**Chi-square value**	**df**	**P value**
	Poor	**Moderate**	**Good**			
Age at menopause						
40-45 years	5	13	3	5.573	6	0.473^{NS}
46-50 years	11	48	5			
51-55 years	12	54	6			
56 years and above	2	3	2			
Religion						
Hindu	27	108	10	21.91	6	0.001*
Muslim	3	5	1			
Christian	**0**	**3**	**3**			
Other	0	2	2			
Education level						
Illiterate	12	45	5	28.01	8	0.001*
Primary education	14	41	2			
Secondary education	3	28	0			
Pre university education	1	4	4			
Graduation and above	0	0	5			
Occupation						
Working	3	31	8	8.860	2	0.012*
Non working	27	87	8			
Average family income						

Below Rs 10.000	12	40	1	20.02	4	0.001*
10000-20000	16	65	6			
20.000 and above	2	13	8			
Source of information						
Health workers	11	34	5	1.495	4	0.827^{NS}
TV and social media	16	70	8			
Other	3	14	3			

In the experimental group the association between pre-test scores of health promotion behavior among elderly women with their selected demographic variables in experimental group which was performed using chi-square test and it showed the statistically significant association was found between pre-test health promotion behavior with religion, educational level, occupation, average family income .

Table 7: Association between pre-test health promotion behaviors among elderly women with their selected demographic variables in control group

Socio Demographic Variables	Health promotion behavior			Chi-square value	df	P value
	Poor	Moderate	Good			
Age at menopause						
40-46 years	2	17	18	38.64	6	0.001*
46-51 years	15	58	3			
51-56 years	5	29	4			
56 years and above	2	9	2			
Religion						
Hindu	19	94	23	3.415	6	0.755^{NS}
Muslim	4	14	3			
Christian	**0**	**4**	**1**			
Other	1	1	0			
Education level						
Illiterate	6	29	6	1.857	8	0.985^{NS}
Primary education	9	42	8			
Secondary education	8	36	11			
Pre university education	1	5	2			
Graduation and above	0	1	0			
Occupation						
Working	5	32	9	0.997	2	0.607^{NS}
Non working	19	81	18			
Average family income						
Below Rs 10.000	8	36	13	3.267	4	0.514^{NS}
10000-20000	10	56	10			
20.000 and above	6	21	4			
Source of information						
Health workers	4	14	5	4.308	4	0.366^{NS}
TV and social media	15	81	14			
Other	5	18	8			

In control group the association between pre-test health promoting behavior among elderly women with their selected demographic variables showed the statistically significant association between pre-test health promotion behavior with age of the women.

DISCUSSION

The study was conducted for around a period of 2 years from November 2019- December 2021. 328 women experiencing physiological menopause residing at Vantamuri and Kinaye villages of Belagavi, Karnataka were assessed for the health promoting behavior which was beneficial in encouraging healthy habits in older women to manage menopausal symptoms. The samples were randomly allotted in the control and experimental group by simple random sampling technique. Pretest was taken for both control and experimental group. Lifestyle Educational program was administered for experimental group and post test was conducted 3 months after the administration of lifestyle Educational program both control and experimental group. Significant mean difference was found in the posttest scores of health promoting behaviors which showcases the impact of lifestyle Educational program.

A study conducted by Tandon VR et al in Kashmir, their findings were congruent with our findings and they strongly recommend the life-style management to be incorporated in daily style of postmenopausal women under controlled supervision[5].
Another study conducted by Eman A et all at Egypt, their findings were also congruent with our findings. They revealed that the healthy lifestyle modifications improved scores of life quality among postmenopausal women in immediately and three months after the nursing intervention. Therefore these modifications can be used by all postmenopausal women to improve their health and fineness of life [6].
In present study many women complained about poor sleep which was congruent with the results of study done by Moudi A et al and Poor sleep quality was associated with low levels of physical activity, smoking and being a housewife compared to being a farmer [7].

CONCLUSION

Present study shows that out 328 menopausal women 231 women had average moderate health promoting behaviors, 43 had good health promoting behaviors 54 health promoting behaviors poor before administration of lifestyle education programme. Following intervention in the experimental group, mean scores in the menopausal women dramatically increased. The study findings showed how a lifestyle education programme can dramatically improve health-promoting behaviours and treat menopausal symptoms in elderly women. A lifestyle education programme can be utilised to manage menopausal symptoms in menopausal women as well as to encourage healthy habits in them.

CONFLICT OF INTEREST: Nil

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