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Bridging the Gap: Effectiveness of a Structured Teaching Programme on Knowledge of Menopausal Symptoms Among Premenopausal Women of Karkala Taluk

1Jenviv kavitha Dsilva, 2Vinutha m, 3Dr sangeetha

1professor , 2professor, 3Associate professor

1phd scholar, srinivas university mukka mangalore,

2phd scholar srinivas university mukka,

3srinivas university mukka mangalore

ABSTRACT

Background of the Study

Menopause is a natural stage in the female life cycle that occurs as ovarian activity gradually declines and menstruation eventually ceases. The transition does not occur suddenly; women may experience a variety of physical, emotional, psychological, sexual and sleep-related changes before and around the time of menopause. The severity and combination of symptoms differ from one woman to another. Common experiences may include hot flushes, disturbed sleep, tiredness, mood changes, anxiety and irritability.

How a woman experiences this transition is influenced not only by physiological changes but also by her understanding of menopause, attitudes towards ageing, body image, self-esteem and changing family or social roles. Inadequate information and misconceptions can create unnecessary worry and may lead to inappropriate ways of coping. In contrast, appropriate education can help women recognize expected changes, adopt healthy practices, seek professional assistance when required and develop practical coping strategies.

For this reason, menopause needs to be considered as an important stage of women's health rather than simply the end of reproductive capacity. Providing information before the transition may help women prepare for changes and make informed decisions about their health.

Objectives

- To assess the pre-test knowledge scores of women regarding menopausal symptoms.
- To determine the effectiveness of the structured teaching programme on menopausal symptoms.
- To determine the association between pre-test and post-test knowledge scores and selected demographic variables.

Methodology

An evaluative research approach using a pre-experimental one-group pre-test–post-test design was adopted. The study was conducted among 50 premenopausal women in Karkala Taluk. Participants were selected through non-probability purposive sampling.

Results

The mean knowledge score increased from 12.04 (SD 5.558) in the pre-test to 23.96 (SD 4.651) in the post-test. The calculated paired t-value was 31.46, which was greater than the table value of 1.68, indicating that the structured teaching programme produced a statistically significant improvement in knowledge at the 0.05 level. Age, education and monthly family income were significantly associated with knowledge scores, whereas occupation, type of family, religion, marital status and previous exposure to the topic did not show a significant association at the stated level.

Conclusion

The findings indicate that the participants initially had limited knowledge about menopausal symptoms. After the structured teaching programme, their knowledge improved considerably. The intervention therefore appears to be a useful educational strategy for preparing premenopausal women to understand and manage the changes associated with menopause.

Key words: Menopause, menopausal symptoms, premenopausal women, structured teaching programme.

INTRODUCTION

Menopause is a normal biological event in a woman's life and is marked by the permanent cessation of menstruation following a decline in ovarian follicular activity. The years surrounding menopause involve gradual hormonal and reproductive changes, and these changes can be accompanied by symptoms affecting several areas of health. Some women may have only mild symptoms, whereas others may find that these changes interfere with everyday activities, sleep, emotional well-being, relationships and overall quality of life.

Although menopause is experienced by women universally, it is often discussed with uncertainty or surrounded by misconceptions. A lack of reliable information may make it difficult for women to distinguish normal menopausal changes from problems that require medical attention. Health education can therefore play an important role in improving awareness, encouraging appropriate self-care and supporting timely health-seeking behaviour.

Menopausal health has particular importance in India because women are living longer and may spend a considerable part of their lives after menopause. This period provides an opportunity to focus on healthy ageing, prevention of disease and maintenance of quality of life. Premenopausal women are an especially relevant group for anticipatory education because information provided before major symptoms appear may help them feel better prepared for the transition.

The present study was undertaken to assess knowledge regarding menopausal symptoms among premenopausal women and to determine whether a structured teaching programme could improve their knowledge. The study also examined whether knowledge levels were related to selected demographic characteristics.

OBJECTIVES OF THE STUDY

- To assess the pre-test knowledge scores of women regarding menopausal symptoms.
- To determine the effectiveness of a structured teaching programme on menopausal symptoms.
- To determine the association between pre-test and post-test knowledge scores of women with selected demographic variables.

RESEARCH HYPOTHESES

H1: There will be a significant difference between the pre-test and post-test knowledge scores regarding menopausal symptoms.

H2: There will be a significant association between the knowledge scores of the women and selected demographic variables.

RESEARCH METHODOLOGY

An evaluative research approach was adopted with a pre-experimental one-group pre-test–post-test design ($O_1 \rightarrow X \rightarrow O_2$). The purpose was to assess the effectiveness of a structured teaching programme in improving knowledge about menopausal symptoms among premenopausal women in Karkala Taluk.

The study included 50 premenopausal women aged 40–48 years. Participants were chosen through non-probability purposive sampling according to the predetermined eligibility criteria. Data were collected using a demographic questionnaire and a 34-item multiple-choice knowledge questionnaire. The knowledge tool covered the anatomy and physiology of the female reproductive system, menopausal symptoms and their management. Each correct answer carried one mark, giving a maximum possible score of 34.

The research tool and structured teaching programme were reviewed and validated by nine experts. Reliability was established using the split-half technique and the Spearman–Brown prophecy formula, with a reliability coefficient of $r = 0.913$. A pilot study involving 10 eligible women was conducted to determine the feasibility of the procedure.

The pre-test was conducted before the educational intervention. The structured teaching programme was then delivered, and the post-test was conducted seven days later. Descriptive statistics were used to summarize the data. A paired-samples t-test was used to compare pre-test and post-test knowledge scores, while Chi-square and Fisher's exact tests were applied to examine associations with selected demographic variables. Ethical requirements were observed throughout the study. Participants provided informed consent, and confidentiality, anonymity and voluntary participation were maintained.

RESULTS

Among the 50 respondents, 40% were between 43 and 45 years of age. Another 32% were in the 46–48-year group, while 28% belonged to the 40–42-year group.

Regarding education, 40% had primary education, 34% had secondary education, 12% had higher secondary education or above, and 14% had no formal education.

In relation to occupation, 68% of the women were employed and 32% were housewives. With regard to family structure, 66% belonged to nuclear families and 34% belonged to joint families.

The religious distribution showed that 60% of the participants were Hindu, 22% were Muslim and 18% were Christian. All participants (100%) were married.

For monthly family income, 38% reported an income of ₹5,000–₹10,000, 24% reported ₹10,000–₹15,000, 16% reported more than ₹15,000 and 22% reported less than ₹5,000.

More than half of the women (58%) reported that they had not previously received information about the topic, while 42% had some previous exposure. Mass media was the most commonly reported source of information (52.6%), followed by friends (28.6%) and family members (19%).

TABLE 1: Frequency and percentage distribution of respondents by demographic characteristics

N = 50;

Demographic characteristic	Category	Frequency (f)	Percentage (%)
Age	40 – 42	14	28
	43 – 45	20	40
	46 -48	16	32
Education	Primary education	7	14
	Secondary education	20	40
	Higher secondary education	17	34
	Graduate	6	12
Occupation	employed	34	68
	House wife	16	32
Type of family	Nuclear	33	66
	Joint	17	34
Religion	Hindu	30	60
	Muslim	11	22
	Christian	9	18
Marital status	married	50	100
Family income	<5000	11	22
	5000-10000	19	38
	10000-15000	12	24
	>15000	8	16
Previous knowledge	Yes	21	42
	No	29	58
Source of	Mass media	11	52.4

information	Family member	4	19
	Friends	6	28.6

Table 2 Knowledge level of respondents in pretest

Knowledge Level	Category	Respondents	
		Frequency	Percent
Inadequate	< 50 % Score	40	80
Moderate	51-75 % Score	10	20
Adequate	> 75 % Score	0	0.0
Total		50	100

Table-2 shows that the 40(80%) of women have inadequate knowledge level (<50%) and 10(20%) of women have moderate knowledge level (50- 75%) and none of them have adequate knowledge on menopausal symptoms.

Table 3 Post-test Knowledge Regarding Menopausal Symptoms

Knowledge level of respondents in post test

Knowledge Level	Category	Respondents	
		Frequency	Percent
Inadequate	< 50 % Score	8	16.0
Moderate	51-75 % Score	9	18

Adequate	> 75 % Score	33	66
Total		10	100

Table-3 explain the posttest knowledge scores. The majority of the subjects 33(66%) had adequate knowledge level (>75%) whereas 9(18%) of the respondents had moderate knowledge level (51-75%) and only8(16%) had inadequate knowledge on menopausal symptoms.

Table 4 Effectiveness of the Structured Teaching Programme

Area wise mean, mean percentage and standard deviation and percentage of enhancement of pre-test and post -test knowledge score

Area wise knowledge score of menopausal symptoms	Max score	Pre-test score			Post-test score			Percentage of enhancement
		Mean	Mean %	SD	Mean	Mean %	SD	
Anatomy and physiology of female reproductive system	5	1.14	22.80%	1.17	3.26	65.20%	0.899	185%
Menopausal symptoms	15	4.70	31.33%	2.40	10.84	72.27%	2.427	129%
Management of menopausal symptoms	14	6.20	44.29%	2.60	9.86	70.43%	1.895	59%
Overall knowledge score on menopausal symptoms	**34**	**12.04**	**5.55%**	**35.4**	**23.96**	**4.65%**	**70.47**	**99%**

Table-4 represents the pre-test and post-test area wise mean, mean %, standard deviation and percentage of enhancement. With regard to the pre-test, the mean for the first area, anatomy and physiology is 1.14 with standard deviation 1.17 and mean percentage 22.80. The mean for second area is 4.70 with a standard deviation 2.40 and mean percentage 31.33. The mean for the third is 6.20 with standard deviation 2.60 and mean percentage 44.29. The overall mean is 12.04 with standard deviation 5.55 and mean percentage 35.41. With regard to the post-test, the mean for the first area is 3.26 with a

standard deviation 0.89 and mean percentage 65.20. The mean for the second area is 10.84 with a standard deviation 2.42 and mean percentage 72.27. The mean for the third area is 9.86 with standard deviation 1.89 and mean percentage 70.43. The overall mean is 23.96 with standard deviation 4.65 and mean percentage is 70.47. The percentage of enhancement for the first area is 185, for second area is 129, for the third area is 59, and overall enhancement is 99, which shows the effectiveness of the structured teaching programme in enhancing the knowledge regarding menopausal symptoms.

Table 5: Association Between Knowledge and Selected Demographic Variables

Comparison between the pre-test and post-test area wise knowledge level on menopausal symptoms

Area wise knowledge score on menopausal symptoms	Pre-test score			Post-test score			t-value	inference
	Mean	Mean %	SD	Mean	Mean %	SD		
Anatomy and physiology of female reproductive system	1.14	22.80%	1.178	3.26	65.20%	0.899	14.38	S
Menopausal symptoms	4.70	31.33%	2.401	10.84	72.27%	2.427	20.87	S
Management of menopausal symptoms	6.20	44.29%	2.603	9.86	70.43%	1.895	16.45	S
Overall knowledge score on menopausal symptoms	12.04	5.558	35.41	23.96	4.651	70.47	31.46	S

S: Statistically significant at P<0.05**t (0.05, 49df) = 1.68**

Table-5 represents the comparison between the pretest and posttest knowledge scores on menopausal symptoms. The t- value at 5% level of significance for the first area is 14.38, t- value for the second area is 20.87, and t- value for the third area is 16.45. The overall t-value is 31.46 at 5% level of significance, which is greater than the table value of 1.68 which indicates the effectiveness of structured teaching programme on knowledge regarding menopausal symptoms. Hence the hypothesis

H_1 - There will be a significant difference between pre-test and post-test knowledge scores regarding menopausal symptoms is accepted.

Association between pretest and post-test knowledge scores of respondents regarding menopausal symptoms with selected demographic variables

Table 6 .Association between pre-test knowledge score with selected demographic variables

Demographic variable	Categories	Pre-test knowledge score of respondents		Chi-square value	df	P-value	Inference
		Below median <12	Above median >12				
Age (yrs)	40-45	7	27	20.75	1	<0.05	S
	46-48	15	1				
Education	Primary and secondary	22	5	Fishers exact test 0.001	1	<0.05	S
	Higher secondary and graduate	0	23				
Occupation	Employed	16	18	0.403	1	<0.05	NS
	Unemployed	6	10				
Type of family	Joint	8	9	0.098	1	<0.05	NS
	Nuclear	14	19				
Religion	Hindu	15	15	1.096	1	<0.05	NS
	Christian and Muslim	7	13				
Marital status	Married	22	28	Only one category, so no association			NS

Family income	>10000	2	18	13.423	1	<0.05	S
	<10000	20	10				
Previous exposure to topic	No	16	13	3.498	1	<0.05	NS
	Yes	6	15				

χ^2 (0.05, 1df) =3.841

Table-6 shows the association of level of pre-test knowledge with selected demographic variables. It is evident from the above table that there is significant association with the variable like age, education and monthly family income and there is no significant association with the variables like occupation, type of family, religion, marital status and previous knowledge.

Table 7 Association between post-test knowledge score with selected demographic variables.

Demographic variable	**Categories**	**Post-test knowledge score of respondents**		**Chi-square value**	**df**	**P-value**	**Inference**
		Below median <26	**Above median >26**				
Age (yrs)	40-45	5	29	15.042	1	<0.05	S
	46-48	12	4				
Education	Primary and secondary	17	10	Fishers exact test 0.001	1	<0.05	S
	Higher secondary and graduate	0	23				
Occupation	Employed	12	22	0.076	1	<0.05	NS

	Unemployed	5	11				
Type of family	Joint	6	11	0.019	1	<0.05	NS
	Nuclear	11	22				
Religion	Hindu	11	19	0.238	1	<0.05	NS
	Christian and Muslim	6	14				
Marital status	Married	17	33	Only one category, so no association			NS
Family income	>10000	1	19	13.423	1	<0.05	S
	<10000	16	14				
Previous exposure to topic	No	12	17	1.676	1	<0.05	NS
	Yes	5	16				

χ^2 (0.05, 1df) =3.841

Table-7 shows the association of level of post-test knowledge with selected demographic variables. It is evident from the above table that there is significant association with the variable like age, education and monthly family income and there is no significant association with the variables like occupation, type of family, religion, marital status and previous knowledge.

Discussion

Among the 50 premenopausal women, the largest proportion (40%) were aged 43–45 years, 40% had primary education, 68% were employed, and 66% belonged to nuclear families. Most participants were Hindu (60%) and all were married. Regarding monthly family income, 38% reported ₹5,000–₹10,000. Notably, 58% had not previously received information regarding menopausal symptoms, while mass media was the main source among those with previous exposure (52.6%).

The pre-test findings indicated poor baseline knowledge, with 80% having inadequate knowledge and 20% having moderate knowledge**;** none had adequate knowledge. The pre-test mean knowledge score was 12.04 ± 5.558**.** Following the structured teaching programme, 66% achieved adequate knowledge, 18% moderate knowledge and only 16% remained inadequate**,** with the mean score increasing to 23.96 ± 4.651**.** The paired *t*-test showed a statistically significant improvement **(**$t = 31.46$, $p < 0.05$**),** demonstrating the effectiveness of the structured teaching programme.

Age, education and monthly family income showed significant associations with both pre-test knowledge **(**$\chi^2 = 20.759$, $p < 0.05$; Fisher's exact $p = 0.001$; $\chi^2 = 13.423$, $p < 0.05$**)** and post-test knowledge **(**$\chi^2 = 15.042$, $p < 0.05$; Fisher's exact $p = 0.001$; $\chi^2 = 10.432$, $p < 0.05$**).** However, occupation, type of family, religion, marital status and previous exposure to the topic were not significantly associated with knowledge ($p > 0.05$). Overall, the findings suggest that the structured teaching programme produced a substantial and statistically significant improvement in knowledge regarding menopausal symptoms.

CONCLUSION

The study showed that most of the premenopausal women had inadequate knowledge about menopausal symptoms before receiving the educational intervention. Following the structured teaching programme, the participants demonstrated a clear improvement in their knowledge scores. The findings support the usefulness of planned health education in helping women understand the menopausal transition and prepare for its associated changes.

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