Impact of Computer Assisted Teaching Regarding Menopause on Knowledge Among Women Residing at Rural Community Amritsar, Punjab

Vijayalakshmi

Abstract

Context: Menopause is an important reproductive milestone in a woman's life which brings a number of physiological changes that affects their day to day adjustments.

Aims: Determine the effectiveness of computer assisted teaching on level of knowledge on menopause among women residing at selected rural community, Amritsar.

Methods and material: The research design was true experimental i.e. Randomized controlled trial design. Double blind study was done among women aged 40-55years residing at Tarsika rural community at Amritsar, Punjab. Simple random sampling technique was used to select 300 samples (150 as control & 150 as experimental group). The tool used was structured knowledge questionnaire. Computer assisted teaching was given to the study group immediately after pretest. Posttest I and II was conducted after one month and third month respectively.

Statistical analysis used: Collected data were coded, tabulated and analysed by descriptive and inferential statistics.

Results: The study findings revealed that in control group, majority of women (66%, 73.3% and 78%) had inadequate knowledge during pretest, posttest-I and posttest-II respectively where as in study group, majority of women (93.3%) had inadequate knowledge during pretest but in posttest-I and II, after computer assisted teaching majority of women were having adequate knowledge (47.3% and 81.3%) in study group. This indicates improved knowledge level following computer assisted teaching.

Conclusions: Based on statistical findings the provision of computer assisted teaching has increased the knowledge on menopause among women aged 40-55 years. Thus women living in rural communities need to educate regarding health and wellbeing during menopausal transition.

Keywords: Computer assisted teaching; Knowledge; Menopause.

Introduction

Menopause is a physiological event in the women's life which is caused by aging up of ovaries that leads to decline in the production of ovarian gonadotropins, estrogen and progesterone. The deficiency of these hormones elicits various somatic, vasomotor, sexual and psychological symptoms.[3] Menopausal age group has aptly been called "the next frontier in women's health care" as health and well-being is an essential need for women.[2] In Indian scenario menopausal health demands high priority due to increasing life expectancy and growing population of menopausal women. Education is necessary for all the women to understand menopause which will make them to cope up with the menopausal symptoms.[4]

Author's Affiliations: Principal, Department of Obstetrics and Gynecology, Shaheed Bhagat Singh Institute of Nursing, Amritsar, Punjab 143601, India.

Corresponding Author: Vijayalakshmi, Principal, Department of Obstetrics and Gynecology, Shaheed Bhagat Singh Institute of Nursing, Amritsar, Punjab 143601, India.

E-mail: Vijayal2006@gmail.com

Statement of the Problem

Impact of Computer Assisted Teaching regarding Menopause on Knowledge among Women residing at Rural Community Amritsar, Punjab.

Objectives

- Assess the level of knowledge on menopause among women residing at selected rural community.

- Determine the effectiveness of computer assisted teaching on level of knowledge on menopause among women residing at selected rural community.

- Find out the association between posttest knowledge on menopause with selected demographic variables.

Hypothesis

HO1: There is a statistically significant change in the level of knowledge on menopause between women those who attend the computer assisted teaching than those who do not.

HO2: There is a statistically significant association between the posttest level of knowledge on menopause and selected demographic variables among study group.

Materials and Methods

Research approach

The research approach used for this study is evaluative approach.

Research Design

True experimental Research Design – Randomized Controlled Trail, is adopted.

Group	Pretest	Intervention (immediately after pretest)	Posttest-I (one month after intervention)	Posttest-II (Three months after intervention)
Study	O1	X	O2	O3
Control	O1	*	O2	O3

Setting of the Study

The study was conducted in selected rural community Tarsika. The distance to community from Amritsar to Tarsika is about 2.2 kilometers. The total population of Tarsika is 1, 32,243.

Target population

The target population selected for this study consists of women from selected rural community of Amritsar district.

Sample Size

The sample size selected for this study through power analysis method. The formula is:

$$n = \frac{(Z)^2 \, p(1-p)}{d^2}$$

p = Presumed prevalence

z = Standard normal variant

d² = square value of one-half of the precision internal around the sample estimate

Level of significance = 5%

Power = 90% or 80%

Effect size = 5%

If the level of effectiveness after RR is 95%

Sample size required = 153 (for 90% power)
                     = 137 (for 80% power)

To round off 80%, the sample size was made into 150.

The sample selected for this study was three hundred women with in the age group 40-55 years. In this study 150 samples were considered as control group and 150 samples as study group.

Sampling Technique

Sampling technique used for this study was simple random sampling by lottery method. First total number of women in the age group of 40-55years in Tarsika was surveyed. Then by simple lottery method, 300 women who fulfilled the inclusion criteria were selected as samples. In this first 150 samples were selected as control group and remaining 150 were considered study group.

Description of the Tool:

The tool consists of four sections.

Section-I

It is demographic variables of women which consist of 2 parts.

- *Part-A* consists of Background variables such as age, marital status, educational status of woman, educational status of husband, occupational status of woman, type of family, family socioeconomic status, type of diet, Sources of health information and Distance of health care facility from house.

- *Part-B* consists of Clinical variables such as

parity of woman, number of health visits per year, suffering from any menopausal symptoms, suffering from any chronic illness, taking hormone replacement therapy, taking calcium supplements and doing any exercise.

Section-II

It consists of structured knowledge questionnaire which contains 40 multiple choice questions regarding menopause. Each question has four options, out of which one is the correct answer.

Scoring Procedure

Section-II

Structured knowledge questionnaire is used to assess the knowledge on menopause among women, which consisted of 40 multiple choice questions. The score 'one' (1) is given for the correct response and zero (0) is given for the wrong responses and total score is 40.

Knowledge	Score	Percentage
Adequate knowledge	27-40	66-100%
Moderately adequate Knowledge	14-26	34 -65%
Inadequate knowledge	1-13	0-33%

Reliability

The reliability of the tool-Structured menopause knowledge questionnaire was assessed by testing the stability through test retest method. The Karl Pearson coefficient formula was used to assess the stability and the value was found to be reliable (r=0.85).

Data Collection Procedure

Written permission from the medical officer of CHC in Tarsika rural community was obtained and oral consent from the samples was obtained. Confidentiality and anonymity was maintained by coding. For double blind study researcher had selected 2 asha health workers as investigators and given training for taking survey and data collection procedure. Then researcher clarified their doubts and evaluated by asking questions. Investigators visited the selected rural community Tarsika and taken survey of women aged between 40-55years. Three hundred Samples were selected randomly by lottery method from survey report on the basis of inclusion criteria. In that first 150 was considered as control group and next 150 as study group. Primly, structured knowledge questionnaire was administered for control and study group,

followed by computer assisted teaching given only to the study group. Teaching was given as small group teaching with 2-3 samples. Posttest-I was conducted after one month with the same tool for both the group. Information booklet was given to the study group for reinforcement purpose immediately after posttest-I. After three months the same tools were administered for the same samples for posttest-II.

Method of Data Analysis

Collected data were coded, tabulated and analyzed by descriptive and inferential statistics. Data were put to statistical inferences by using SPSS software package.

Result

Description of sample characteristics

Distribution of women regarding age majority of the women were belong to 40-45years (45.3%) in the control group and more than 52 years (44.7%) in the study group. Less number of women belong to more than 52years (26.7%) in control group and 40-45years (24.7%) in study group.

According to the marital status of women, majority of the women were married (87.3%) in control and (85.3%) study group.

Description of educational status of women, majority of women were having primary education (32.7%) in control group and illiterate (54.7%) in study group. Less number of women were graduate and above (10%) in control group and (0.7%) in study group.

Distribution of women regarding educational status of husband, majority were having secondary education (28.7%) in control group and illiterate (42.7%) in study group. Very few were graduates and above in both control group (12.7%) and study group (0.7%).

According to occupational status of the women, majority were house wives (76.7%) in control group and (63.3%) in study group.

According to type of family, majority of women were belonging to nuclear family (72.7%) in control group and (50%) in study group.

According to the monthly family socio economic status, most of the women (30.7%) were having monthly income up to Rs. 30,000 and above in control group where as in study group most of the

women (84%) were having monthly income up to Rs. 5,000.

Description of type of diet, majority of women were vegetarian (72.7%) in control group and (77.3%) in study group. Less number of women were non-vegetarian (27.3%) in control group and (22.7%) in study group.

According to sources of health information, majority of women gathered information from peer and family members (46.7%) in control group and (58%) in study group.

According to distance of health care facility from house, majority of women were having health care facility less than 5km from their house (64%) in control group and (72%) in study group.

According to age at menarche, most of the women had attained menarche at 13-15 years (58.7%) in control group and more than 15 years (59.3%) in study group. Very few had attained menarche at less than 10 years (2.7%) in control group and (0.7%) in study group.

According to age at marriage, majority of women had marriage at 19-22 years (61.3%) in control group and (69.3%) in study group.

According to age at menopause, majority of women had not attained menopause (66%) in control group and (70.66%) in study group. Majority of women had attained menopause at the age of 41-45 years (13.3%) in control group and 46-50 years (16%) in study group.

Distribution of women regarding parity, majority of women were having 1-3 children (75.3%) in control group and (52%) in study group.

Description of women regarding number of health visits per year, most of the women had not gone for health visits (36%) in control group and (52%) in study group. Very few women had gone for 7 and more health visits (4%) in control group and (2%) in study group.

According to woman's experience of menopausal symptoms, most of the women were peri-menopausal (43.3%) in control group and (65.3%) in study group. Less number of women were post-menopausal (34%) in control group and (29.3%) in study group.

According to woman's suffering from any chronic illness, majority of women had no illness (47.3%) in control group and (55.3%) in study group. Most of the women had hypertension (16% &18%) and diabetes mellitus (14.7% & 12%) in control group and study group respectively.

According to women taking hormone replacement therapy, majority were not taking hormone replacement therapy (93.3%) in control group and (98%) in study group. Very few women were taking hormone replacement therapy (6.7%) in control group and (2%) in study group.

According to women taking calcium supplements, majority were not taking calcium supplements (56.7%) in control group and (81.3%) in study group. Less number of women were taking calcium supplements (40.7%) in control group and (18%) in study group.

According to women doing any exercise, majority were not doing exercise (59.3%) in control group and (82%) in study group. Less number of women were doing exercise (40.7%) in control group and (18%) in study group.

First objective- Assess the level of knowledge on menopause among women residing at selected rural community.

Data analysis showed that during pretest in both control and study group, majority of women (66% and 93.3%) had inadequate knowledge respectively. The mean score of pretest level of knowledge in the control group and study group were (11.39 ± 4.739) and (9.41 ± 3.001) respectively and the 't' value -4.323 was significant at 0.05 level. (Table-1)

Second Objective- Determine the effectiveness of computer assisted teaching on level of knowledge on menopause among women residing at selected rural community.

During posttest-I in control group, majority of women (73.3%) had inadequate knowledge and none (0%) had adequate knowledge where as in the study group, majority of women had moderately adequate (50.7%) and adequate knowledge (47.3%). (Fig-1,2) The mean score of posttest-I level of knowledge in the study group (23.97 ± 6.283) was higher than the control group (11.49 ± 3.720) and the 't' value 20.945 was significant at 0.05 level. Hence there is a statistically significant change in the level of knowledge between menopausal women those who attend the computer assisted teaching than those who do not. So hypothesis (H01) is accepted. (Table-2)

During posttest-II in control group, majority of women (78%) had inadequate knowledge and none (0%) had adequate knowledge where as in the study group, majority of women had adequate knowledge (81.3%) and none (0%) had inadequate knowledge. (Fig-1,2) The mean score of posttest-II level of knowledge in the study group (28.95 ± 3.565)

Vijayalakshmi / Impact of Computer Assisted Teaching Regarding Menopause on Knowledge Among
Women Residing at Rural Community Amritsar, Punjab

95

was higher than the control group (11.04 ± 3.336) and the 't' value 44.922 was significant at 0.05 level. Hence there is a statistically significant change in the level of knowledge between menopausal women those who attend the computer assisted teaching than those who do not. So hypothesis (H01) is accepted. (Table-3)

In control group, majority of women (66%, 73.3% and 78%) had inadequate knowledge during pretest, posttest-I and posttest-II respectively. In study group, majority of women (93.3%) had inadequate knowledge during pretest. In posttest-I and II, significant change was observed in knowledge level

of the study group after computer assisted teaching that majority of women were having adequate knowledge (47.3% and 81.3%). (Fig-1, 2)

Third objective- Find out the association between posttest knowledge on menopause with selected demographic variables.

Data analysis showed that there is significant association found between posttest-I level of knowledge of women with selected demographic variables, when compared to marital status of woman (=7.005)and parity of woman (=14.493) . There is no association found between posttest-I level of knowledge of women with other

Table 1: Frequency, percentage, mean, standard deviation and 't' value distribution of pretest knowledge level of women regarding menopause in control and study group. (n¹=150; n²=150)

S. no..	Group	Pretest Knowledge level	F	%	Mean	SD	"t" value	P value
1	Control group	Adequate	0	0				
		Moderately adequate	51	34.0	11.39	±4.739		
		Inadequate	99	66.0			-4.323 (S)	0.000
2	Study group	Adequate	0	0				
		Moderately adequate	10	6.7	9.41	3.001		
		Inadequate	140	93.3				

S= Significant; NS=Not significant; P≤0.05 level

Table 2: Frequency, percentage, mean, standard deviation and 't' value distribution of posttest-I knowledge level of women regarding menopause in control and study group. (n¹=150; n²=150)

S. no.	Group	Posttest-I Knowledge level	F	%	Mean	SD	't' value	P value
1	Control group	Adequate	0	0				
		Moderately adequate	40	26.7	11.49	±3.720		
		Inadequate	110	73.3			20.945 (S)	0.000
2	Study group	Adequate	71	47.3				
		Moderately adequate	76	50.7	23.97	±6.283		
		Inadequate	3	2.0				

S= Significant; NS=Not significant; P≤0.05 level

Table 3: Frequency, percentage, mean, standard deviation and 't' value distribution of posttest-II knowledge level of women regarding menopause in control and study group. (n¹=150; n²=150)

| S. no.	Group	Posttest-II Knowledge level	F	%	Mean	SD	't' value	P value
1	Control group	Adequate	0	0				
		Moderately adequate	33	22.0	11.04	±3.336	44.922 (S)	0.000
		Inadequate	117	78.0				
2	Study group	Adequate	122	81.3				
		Moderately adequate	28	18.7	28.95	±3.565		
		Inadequate	0	0				

S= Significant; NS=Not significant; P≤0.05 level

demographic variables.

Data showed that there is significant association found between posttest-II level of knowledge of women with selected demographic variables, when compared to type of family (=7.401) and monthly family socio economic status (=12.480). There is no association found between posttest-II level of knowledge of women with other demographic variables.
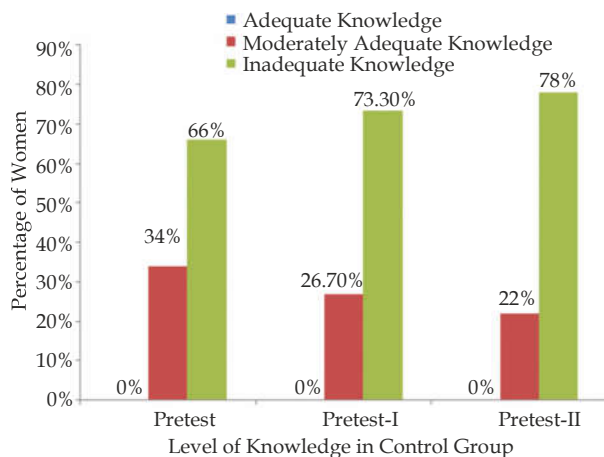
Fig 1: Comparison of level of Knowledge between Pretest and Posttest in Control Group.
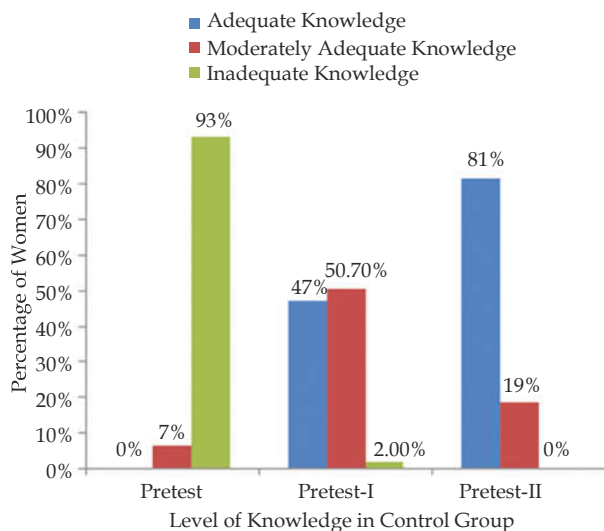
Fig 2: Comparison of level of Knowledge between Pretest and Posttest in Study Group.

Discussion

The findings are supported by a study conducted in Karnataka by Anuchithra. S (2013) to assess the knowledge of 600 menopausal women revealed that majority of women (54.17%) was having inadequate knowledge regarding menopause. The mean value of knowledge on menopause of menopausal women was 46.75 with the standard deviation of 18.028 which fell in the inadequate level.[1]

The findings are consistent with a study conducted by Jasmine Santha J (2012) revealed that significant association was found between knowledge and demographic variables such as education, occupation and monthly income.[7]

Conclusion

The study findings revealed that there was a marked changes observed in level of knowledge on menopause between women those who have attended the computer assisted teaching than those who do not.[5]

In control group, majority of women (66%, 73.3% and 78%) had inadequate knowledge during pretest, posttest-I and posttest-II respectively where as in study group, majority of women (93.3%) had inadequate knowledge during pretest but in posttest-I and II, significant changes were observed in knowledge level of the study group after computer assisted teaching that majority of women were having adequate knowledge (47.3% and 81.3%). So there is a statistically significant change found in the level of knowledge between menopausal women those who attend the computer assisted teaching than those who do not.[6]

Acknowledgement

I would like to acknowledge the study participants for their cooperation and responses. My sincere thanks to all those who have helped me directly and indirectly in the successful completion of this study.

Conflict of interest

This study is self-funded research work. So there is no conflict of interest.

References

1. Anuchithra, S. (2013) Knowledge and attitude of menopausal women. Nightingale Nursing Times, 8(10), 61-64.

2. Berterap, C. (2003) What do women think about menopause? A qualitative study of women's expectations, apprehensions and knowledge about the climacteric period. Int Nurs Rev, 50(2), 109-18.

3. Beverly N. Ayers. (2011) The menopause. The psychologist, 24(5), 348-353.

4. Buxton Blake, P. (2002) Menopausal treatment dilemma: a challenge for women and nurses. Contemp Nurse, 13(2-3), 117-125.

5. Elavsky, S. (2009) Physical activity, menopause, and quality of life: the role of affect and self-worth across time. Menopause, 16(2), 265-71.

6. Im, E.O. (2009) Ethnic differences in symptoms experienced during the menopausal transition. Health Care Women Int., 30(4), 339-55.

7. Jasmine Santha, J. (2012) Care of women in menopause. Nightingale Nursing Times, 8(6), 17-19.