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Impact of Computer Assisted Teaching Regarding Menopausal Transition among Women Residing at Rural Community Amritsar, Punjab

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Abstract

Context: Menopause is a significant life event affecting millions of women globally.Menopausal transition is a difficult process and has a considerable variation among women regarding the manifestation of menopausal signs and symptoms.

Aims: Evaluate the effectiveness of computer assisted teaching on menopausal transition among women residing at selected rural community.

Methods and Material: A double blind study was conducted among women aged 40-55 years residing at Tarsika rural community, Amritsar, Punjab. The research design was true experimental i.e. Randomized controlled trial design. Simple random sampling technique was used to select 300 samples for the study. The tool used for the study was menopause rating scale. Computer assisted teaching was given to the experimental group immediately after pretest. Post-test I and II was conducted after one month and third month respectively.

Statistical analysis used: The data gathered was analyzed by descriptive and inferential statistics.

Results: Results revealed that in the control group, majority of women (42.7%, 47.3% and 58.7%) had severe and moderate level of menopausal transition during pretest, posttest-I and posttest-II respectively where as in experimental group, majority of women (48.7%) had severe level of menopausal transition during pretest but there was a marked change observed in the posttest-I and II level of menopausal transition. After computer assisted teaching in the experimental group, majority of women had mild level of menopausal transition (70.7% and 72.7%) in post-test I and post-test II.

Conclusion: The findings revealed that the provision of computer assisted teaching has reduced the severity of menopausal symptoms and very effective during menopausal transition.

Keywords: Menopause; Menopausal transition; Computer assisted teaching.

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INTRODUCTION

The menopausal transition is a natural process and a developmental phase of life. In many women menopausal transition is a troublesome period of life and is often associated with decreased well-being and number of symptoms.[1] Women going through the menopause transition may experience a variety of symptoms ranging from

vasomotor symptoms to sleep disturbance, mood disorders, loss of sexual desire and vaginal dryness. The symptoms can make it a considerable struggle for those who are already dealing with their hectic lives.[2] Large efforts are required to educate and make women to be aware of menopausal symptoms.

STATEMENT OF THE PROBLEM

Impact of Computer Assisted Teaching regarding Menopausal Transition among Women residing at Rural Community Amritsar, Punjab.

OBJECTIVES

- Assess the menopausal transition among women residing at selected rural community.
- Evaluate the effectiveness of computer assisted teaching on menopausal transition among women residing at selected rural community.
- Find out the association between menopausal transition andselected demographic variables of women.

HYPOTHESIS

HO1: There is a statistically significant change in menopausal transition between women those who attend the computer assisted teaching than those who do not.

HO2: There is a statistically significant association between menopausal transition and selected demographic variables among study group.

MATERIALS AND METHODS

Research approach : Evaluative approach.

Research Design : Randomized Control Trail; True Experimental Design.

Setting of the Study : Rural community, Tarsika, Baba Bakala, Amritsar, Punjab.

Target Population : Women with in the age group 40-55 years.

Sample Size : Total three hundred women with in the age group 40-55 years in that 150 samples were control group and the other 150 samples were study group.

Sampling Technique : Simple random sampling by lottery method.

DESCRIPTION OF THE TOOL

The tool consists of two sections.

Section-I

It is demographic variablesof 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

- The Menopause rating scale consists of 11 symptoms of menopause. It includes 5 columns for responses (None, mild, moderate, severe and very severe) with a score of 0, 1, 2, 3 and 4 respectively.

SCORING PROCEDURE

Section-II

Menopause rating scale was developed by ZEG Berlin center for epidemiology and health research.3 MRS is used to assess the symptoms of menopause (Menopausal transition) consisting of 11 items. It includes 5 columns for responses (None, mild, moderate, severe and very severe) with a score of 0, 1, 2, 3 and 4 respectively. Total score is 44.

Menopause symptoms	Score	Percentage
No symptoms	0	0%
Mild symptoms	1-11	1-25%
Moderate symptoms	12-22	26-50%
Severe symptoms	23-33	51-75%
Very severe symptoms	34-44	76-100%

RELIABILITY

The reliability of the tool- menopause rating scale is standardized tool and found to be highly reliable.

Pilot Study

Pilot study was conducted for thirty women (15 as control group and 15 as study group) to find out the effectiveness of computer assisted teaching regarding menopausal transition in Tarsika rural community at Amritsar for a period of 30 days to find out the feasibility of the study and to plan for data analysis on the basis of pilot study. Written permission was obtained from the medical officer of Tarsika community health center and oral consent was obtained from the subjects after explaining the purpose of the study. Researcher has given training to one ASHA health worker about data collection.

Data was collected by one ASHA health worker who was trained by the researcher. First 15 samples were selected as control group for data collection. Pretest was conducted for each woman to collect the demographic variables and to assess the menopausal transition with structured tool. Then the investigator selected 15 samples for study group and pretest was conducted with same tool. Immediately after the pretest, computer assisted teaching on menopause for 45 minutes was given only to the study group by using laptop as small group teaching. After 15 days of pretest, posttest was conducted for both control group and study group with the same tool to assess the effectiveness of computer assisted teaching.

Data were analyzed and findings of the pilot study showed that there was a mild change found between pretest and posttest level of menopausal symptoms in study group. There is no significant association found between level of menopausal transition and selected background variables among study group. After the pilot study results concluded that it is feasible and practicable to conduct the main study.

DATA COLLECTION PROCEDURE

True experimental research study was conducted by using double blind study method. 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. Written permission from the medical officer of CHC in Tarsikarural community was obtained.Investigators visited the selected rural community Tarsika and taken survey of women aged between 40-55 years. Three hundred Samples were selected randomly by lottery method from survey report on the basis of inclusion criteria. Oral consent from the samples were obtained. In that first 150 was considered as control group and next 150 as study group. Primly, validated menopause rating scale 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 tools 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.Collected data were coded, tabulated and analyzed by descriptive and inferential statistics.

STATISTICAL ANALYSIS

Data were put to statistical inferences by using SPSS software package.

S. No.	Data analysis	Methods	Purpose
1.	Descriptive statistics	Frequency percentage mean Standard deviation.	To assess the pretest and posttest level of menopausal transitionamongstudy group and control group.
2.	Inferential statistics	Paired 't' test	To find out the differences in pretest and posttest level of menopausal transition amongstudy and control group.
		Independent 't' test	To find out the effectiveness of computer assisted teaching on menopausal transition between study group and control group
		Chi-square test ANOVA	To find out the association between demographic variables and posttest level of menopausal transition in study group.

RESULTS

Findings related to Demographic Variables of Women

In the control group, majority of the women were belonging to 40-45 years (45.3%), married (87.3%), having primary education (32.7%), house wife (76.7%) and vegetarian (72.7%). The data revealed that majority were belonging to nuclear family (72.7%), having 1-3 children (75.3%) and monthly family socio economic status up to 30000 and above

(30.7%). Clinical variables depicts that majority of women had menarche at the age of 13-15 years (58.7%), marriage at 19-22 years (61.3%) and not attained menopause (66%). Most of them were peri-menopausal (43.3%), suffering from no illness (47.3%), not taking hormone replacement therapy (93.3%), not taking calcium supplements (56.7%) and not doing any exercise (59.3%). Total 36% of women were not going for health checkup whole year. Distance of health care facility from the house was less than 5km for most of the women (64%). Majority of woman's husband (28.7%) were having secondary education. Majority of women (46.7%) got information from peer and family members.

In study group, majority of the women belonged to more than 52 years (44.7%), married (85.3%), illiterate (54.7%), house wife (63.3%) and vegetarian (77.3%). The data revealed that majority were belonging to nuclear family (50%), having 1-3 children (52%) and monthly family socio economic status up to 5000 (84%). Clinical variables depicts that majority of women had menarche at the age of more than 15 years (59.3%), marriage at 19-22years (69.3%) and not attained menopause (70.66%). Most of them were peri-menopausal (65.3%), not suffering from any illness (55.3%), not taking hormone replacement therapy (98%), not taking calcium supplements (81.3%) and not doing any exercise (82%). Total 52% of women were not going for health checkup whole year. Distance of health care facility from the house was less than 5Km for most of the women (72%). Majority of woman's husband (42.7%) were illiterate. Majority of women (58%) got information from peer and family members.

First objective- Assess the menopausal transition among women residing at selected rural community

Data analysis showed that during pretest in both control and study group, most of the women (42.7% and 48.7%) had severe level of menopausal symptoms respectively. The mean score of pretest level of menopausal symptoms in the control group and study group were (13.53 ± 4.739) and (22.65 ± 6.921) respectively and the 't' value 2.400 was significant at 0.05 level.

During posttest-I in control group, majority of women (47.3%) had moderate level of menopausal transition where as in the study group, majority of women had mild symptoms (70.7%). The mean score of posttest-I level of menopausal transition in the study group (8.60 ± 4.197) was lower than the control group (18.25 ± 8.516) and the 't' value -12.445 was significant at 0.05 level. Hence there is a statistically significant change in menopausal transition between menopausal women those who attend the computer assisted teaching than those who do not. So hypothesis (H01) is accepted.

During post-test II in control group, majority of women (58.7%) had moderate level of menopausal transition where as in the study group, majority of women had mild symptoms (72.7%). The mean score of post-test II level of menopausal transition in the study group (8.34 ± 4.068) was lower than the control group (20.87 ± 6.672) and the 't' value -19.644 was significant at 0.05 level.So hypothesis (H01) is accepted.

In the control group, majority of women (42.7%, 47.3% and 58.7%) had severe and moderate level of menopausal transition during pretest, posttest-I and posttest-II respectively. In study group, majority of women (48.7%) had severe level of menopausal transition during pretest where as in posttest-I and II, marked changes were observed in the level of menopausal transition after computer assisted teaching. Majority of women had mild level of menopausal transition (70.7% and 72.7%) in posttest I and posttest II.

Second objective- Evaluate the effectiveness of computer assisted teaching on menopausal transition among women residing at selected rural community

The mean score of pretest and posttest-I level of menopausal transition in the control group were (20.51 ± 8.403) and (18.25 ± 8.516) respectively. The mean score of pretest and posttest-I level of menopausal transition in the study group were (22.65 ± 6.921) and (8.60 ± 4.197) respectively. The post test-I mean score (8.60 ± 4.197) was lower than the pretest mean score (22.65 ± 6.921), the 't' value 24.322 was significant at 0.05 level in the study group. The post test-I mean score (18.25 ± 8.516) was slightly lower than the pretest mean score (20.51 ± 8.403) the 't' value 2.580 was significant at 0.05 level in the control group. The mean posttest-I scores of menopausal transition in the study group (8.60 ± 4.197) was significantly lower than the mean posttest-I scores of menopausal transition in the control group (18.25 ± 8.516). Hence there is a statistically significant change in menopausal transition between menopausal women those who attend the computer assisted teaching than those who do not. So hypothesis (H01) is accepted.

The mean score of pretest and posttest-II level of menopausal transition in the control group were (20.51 ± 8.403) and (20.87 ± 6.672) respectively. The mean score of pretest and posttest-II level of

menopausal transition in the study group were (22.65 ± 6.921) and (8.34 ± 4.068) respectively. The post test-I mean score (8.34 ± 4.068) was lower than the pretest mean score (22.65 ± 6.921), the 't' value 23.153 was significant at 0.05 level in the study group. The post test-II mean score (20.87 ± 6.672) was slightly higher than the pretest mean score (20.51 ± 8.403) the 't' value -0.452 was not significant at 0.05 level in the control group. The mean posttest-II scores of menopausal transition in the study group (8.34 ± 4.068) was significantly lower than the mean posttest-II scores of menopausal transition in the control group (20.87 ± 6.672).So hypothesis (H01) is accepted.

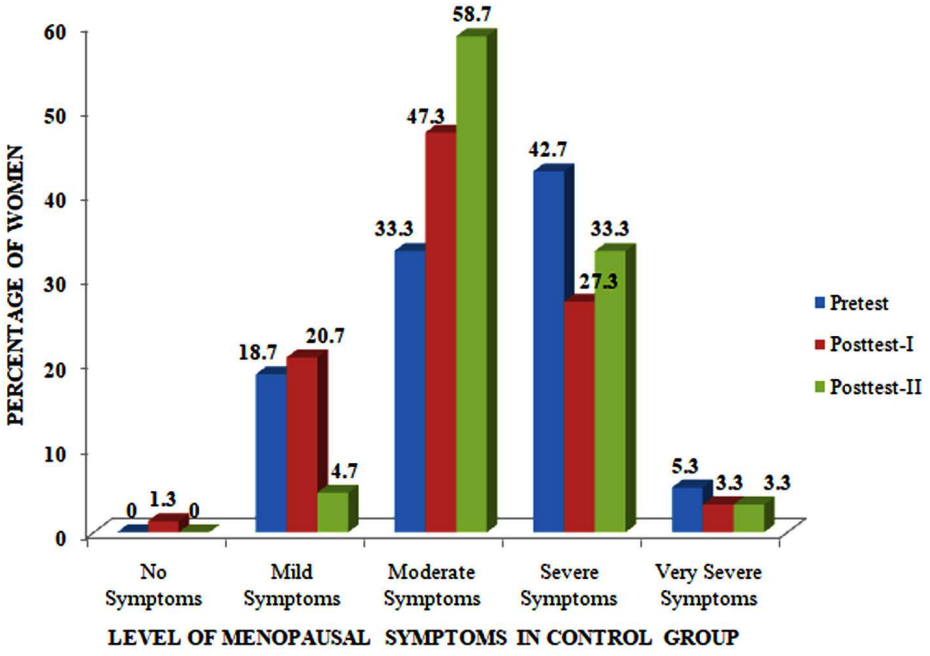

Fig. 1: Comparison of level of menopausal symptoms between pre-test and post-test in control group

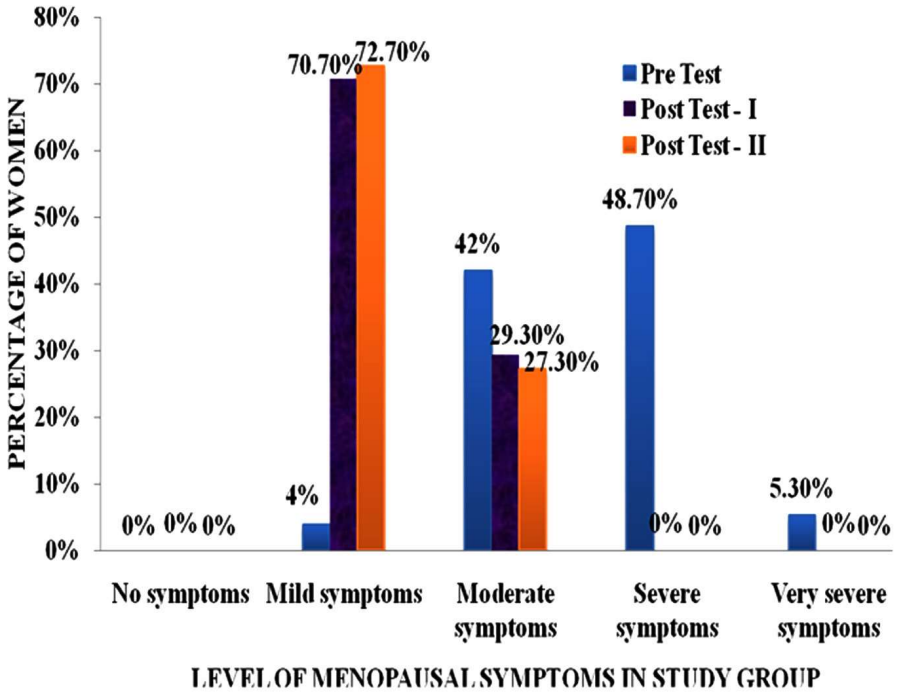

Fig. 2: Comparison of level of menopausal symptoms between pretest and posttest in study group

Table 1: Frequency, percentage, mean, standard deviation and't' value distribution of posttest-I symptoms level of women regarding menopause in control and study group

(n^1=150; n^2=150)

S. No.	Group	Posttest-I Symptoms level	F	%	Mean	Standard deviation	't' value	P value
1	Control group	No symptoms	2	1.3				
		Mild symptoms	31	20.7				
		Moderate symptoms	71	47.3	18.25	± 8.516		
		Severe symptoms	41	27.3				
		Very severe symptoms	5	3.3			-12.445 (S)	0.000
2	Study group	No symptoms	0	0				
		Mild symptoms	106	70.7				
		Moderate symptoms	44	29.3	8.60	± 4.197		
		Severe symptoms	0	0				
		Very severe symptoms	0	0				

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

Table 2: Frequency, percentage, mean, standard deviation and't' value distribution of posttest-II symptoms level of women regarding menopause in control and study group

(n^1=150; n^2=150)

S. No.	Group	Posttest-II Symptoms level	F	%	Mean	SD	't' value	P value
1	Control group	No symptoms	0	0				
		Mild symptoms	7	4.7				
		Moderate symptoms	88	58.7				
		Severe symptoms	50	33.3	20.87	± 6.672		
		Very severe symptoms	5	3.3			-19.644 (S)	0.000
2	Study group	No symptoms	0	0				
		Mild symptoms	109	72.7				
		Moderate symptoms	41	27.3	8.34	± 4.068		
		Severe symptoms	0	0				
		Very severe symptoms	0	0				

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

Third objective- Find out the association between menopausal transition with selected demographic variables of women

Results showed that there was significant association found between posttest-II level of menopausal transition of women with their selected demographic variables, when compared to age (=6.387) and education status of woman (=11.853). So hypothesis (H02) is accepted.

There was no significant association found between posttest-II level of menopausal transition of women with other demographic variables such as marital status, education status of the husband, Occupation, type of family, monthly family socio economic status, type of diet , sources of health information, distance of health care facility from house, age at menarche, age at marriage, age at menopause, parity of women, number of health visit per year, menopausal symptom status, chronic illness status, taking HRT, taking calcium and doing exercise.

DISCUSSION

The study findings are congruent with the study conducted by Leena D Souza and Anitha C Rao (2012) in Karnataka to assess the health problems among 50 urban and 50 rural menopausal women which revealed that 50% of the rural menopausal women had experienced moderate symptoms, 16% had severe symptoms while 14% had mild symptoms and remaining 20% had not experienced symptoms. The study concludes that menopausal health problems were more prevalent among

women residing in rural area when compared to the women residing in urban area.

These findings are consistent with a study conducted in Israel by Rotem M. et. al., (2005) to examine the impact of psycho-educational program for improving woman's attitudes and coping with menopause symptoms revealed that participants reported significant improvements in attitudes and reductions in symptom severity compared to their own baseline scores and compared with the control group.

CONCLUSION

Results revealed that in the control group, majority of women (42.7%, 47.3% and 58.7%) had severe and moderate level of menopausal transition during pretest, posttest-I and posttest-II respectively where as in study group, majority of women (48.7%) had severe level of menopausal transition during pretest but there was a marked change observed in the posttest-I and II level of menopausal transition. After computer assisted teaching in the study group, majority of women had mild level of menopausal transition (70.7% and 72.7%) in post-test I and post-test II respectively. Thus computer assisted teaching was effective in reducing menopausal symptoms.

Acknowledgement

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Conflict of interest

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

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