RESEARCH
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A PILOT STUDY ON EFFECTIVENESS OF INTEGRATED COMMUNITY BASED NURSING INTERVENTION ON SELECTED PSYCHOSOCIAL PARAMETERS AMONG POST MENOPAUSAL WOMEN RESIDING IN SELECTED RURAL AREAS OF BAGALKOT DISTRICT

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Abstract

Background: Menopause is one point in a continuum of life stages for women and marks the end of their reproductive years. Menopause is a natural process that results from changing levels of estrogen, progesterone, and other hormones as woman get age. Most women experience menopause between the ages of 45 and 55 years as a natural part of biological ageing.

Objectives: To assess the level of depression, Anxiety and irritability scores among postmenopausal women and to evaluate the effectiveness of Integrated Community Based Nursing Intervention by comparing post interventional level of scores of depression, Anxiety and irritability between the experimental and control group of postmenopausal women. To find out the association between pre test level of depression, Anxiety and irritability scores with selected socio demographic variables of postmenopausal women.

Method: Quantitative evaluative approach was adopted for the present study, using true experimental pre-test post-test control group design. Sample size consist of 40 menopausal women i.e. 20 in experimental group and 20 in control group, residing in selected areas of Kadapati, Jamakandi taluk Bagalkot district. A non probability Purposive sampling techniques was used to select the samples for pilot study. The data was collected by using following tools. A structured questionnaire for assessing socio-demographic variables. Center for epidemiologic studies depression scale (CES-D) to assess the level of depression, General anxiety disorder-7(GAD-7) to assess the level of anxiety, Dr. Viviana mauas irritability questionnaires to assess the level of irritability among menopausal women, data was entered in MS excel sheet and transferred to SPSS 25 for analysis.

Results: Among 40 samples, majority of 12(60%) of the respondents belonged to the age group of 51-55 years and remaining 8(40%) of participants were belonged to age group of 45-50 years in experimental and control group. Majority 9(45%) were had primary education in experimental and control group. Majority 16(80%) were belonged to Hindu religion in experimental group 17(85%) were belonged to Hindu religion in control group. Majority 12(60%) were had one pregnancy in experimental group and 10(50%) were had one pregnancy in control group. Pretest scores among the experimental group, the depression scores mean scores was 24.50 with standard deviation ±7.08 and Control group depression mean score was 24.20 with standard deviation±7.16. After the implementation of intervention, Post test 1-Day 30 scores: among the experimental mean scores in day 30 was 20.25 with±5.63, Control group, the score mean was 24.15 with SD±7.02, In pretest, majority14(70%) were had mild level, each 3(15%) were had no depression and moderate level depression. In post test 1, posttest 2 and 3majority 14 (70%) were had mild level and 6(30%) were had no depression. Among the Experimental group, the anxiety mean scores at the time pretest was 9.95 with SD±2.99, Control group, the anxiety score mean was 10.50 with standard deviation ±3.96, Among the Experimental group, the anxiety scores mean scores in post test 1day 30 was 7.45 with standard deviation ±2.72, Control group, the score mean was 10.55 with standard deviation ±3.99. In experimental group pretest anxiety scores

shown that majority10 (50%) were had moderate level, 8(40%) were had severe level and each 1(5%) were had very severe level of anxiety. In post test 1 majority14 (70%) were had moderate level, 4(20%) were had mild level and 2(10%) were had severe level of anxiety. In control group pretest and all posttests, majority15 (75%) were had moderate level, 3(15%) were had severe level and remaining 2(10%) were had mild levels of anxiety. Pretest level of irritability scores shown that majority15 (75%) were had moderate level, 3(15%) were had severe level and 2(10%) were had mild level of irritability. In post test 1 level of irritability scores shown that majority10(70%) were had mild level, 9(45%) were had moderate level and 1(5%) were had severe level of irritability. Control group pretest and all posttests shown that majority14 (70%) menopausal women had moderate level and each 3(15%) were had mild level and severe level of irritability.

Conclusion: After obtaining the results for the present study the researcher noticed that there was significant difference in depression, Anxiety and irritability level of scores found between among menopausal women after implementation of integrated community based nursing intervention. The study concluded that interventional programmes are beneficial for menopausal women to lead a healthy and quality of life.

Keyword: Menopause Women, Depression, Anxiety and Irritability

INTRODUCTION

Menopause marks the natural end of fertility and occurs 12 months after last menstrual period. Symptoms of menopause may start several years earlier and include menstrual changes, hot flashes, night sweats, and flushing. Symptoms can continue for several years after menopause[1]. Certain lifestyle changes can help improve overall well-being and aid in symptom management. Such as Personal care, diet and nutrition such as eating a balanced diet and Exercise can help strengthen your body, boost overall well-being, and manage weight. Adopting a yoga or meditation practice to help manage stress[2].

Need for study: The global population of postmenopausal women is growing. In 2021, women aged 50 and over accounted for 26% of all women and girls globally. This was up from 22% 10 years earlier[3]. Additionally, women are living longer. Globally, a woman aged 60 years in 2019 could expect to live on average another 21 years[4].

OBJECTIVES OF THE STUDY

1) To assess the level of depression, Anxiety and irritability scores among postmenopausal women.

2) To develop and administer the Integrated community based nursing intervention for postmenopausal women.

3) To evaluate the effectiveness of Integrated Community Based Nursing Intervention by comparing post interventional of depression, Anxiety and irritability level of scores between the experimental and control group of postmenopausal women.

4) To correlate scores of depression, Anxiety and irritability among the postmenopausal women of experimental group and control group.

5) To find out the association between pretest level of depression, Anxiety and irritability scores with selected socio demographic variables of postmenopausal women of experimental group and control group.

METHODS

Quantitative evaluative approach was adopted for the present study, using true experimental pre-test post-test control group design with longitudinal measurement of outcomes.

Study participants: The study participants were the menopausal women who are residing in selected rural areas of Bagalkot district.

Setting of the study: The present study was conducted at kadapatti rural area of Jamakandi Taluk Bagalkot District.

Sampling technique: The sample was selected by using non probability purposive sampling technique was used to select the samples at rural area of kadapati, Jamakandi Taluk Bagalkot.

Data collection instrument:

Data from postmenopausal women will be collected by using self report methods.

1. **Structured questionnaires-** for assessment of socio-demographic variables and clinical characteristics.
2. **Center for epidemiologic studies depression scale (CES-D):** It consists of 20 statements with total score ranging 0-60. Cut off point is 16. Score less than 16 is not having any clinical significance. Symptom etiology increases with increase in score.
3. **General anxiety disorder-7(GAD-7):** It is the scale for assessing anxiety**.** It consists of 7 items. A total score range of 0-21, where 0-5(mild severity), 6-10 (moderate) 11-15 (moderately severe) and 15-21 (severe anxiety).
4. **Dr. Viviana mauas irritability questionnaire :** It consists of 14 items to assess the experience of irritability not at all, A little or some of the time, Often, Most, or all of the time.

Reliability of data collection instruments:

Reliability of the tool was tested by test retest method by using Karl Pearson's Co-efficient of Correlation formula. Item analysis was done to test internal consistency. This is done by critically evaluating questions based on difficult index and Discriminative index.

The reliability of tools is as follows-

- Center for epidemiologic studies depression scale (CES-D):0.82
- General anxiety disorder-7(GAD-7):0.80
- Dr. Viviana mauas irritability questionnaires:0.79

Data collection procedure:

In the present study the data will be collected from postmenopausal women through

Self report methods.

The investigator has planned to collect data with following steps:

Step 1: Obtaining formal administrative approval from the principal of Sajjalashree Institute of Nursing Sciences, Bagalkot.

Step 2: Obtaining the approval from Intitutional ethical clearance committee.

Step 3: Obtaining administrative approval from District Health officer Bagalkot.

Step 4: Obtaining the written consent from postmenopausal women.
Step 5: Assessment of baseline data.
Step 6: Eight sessions of Integrated Community Based Nursing Intervention (two sessions per week) will be given to experimental group and no intervention for control group.
Step 7: Post intervention assessments will be done after first (Immediate post intervention), second & third month for all the variables.
Ethical clearance: Ethical clearance certificate was obtained from institutional ethical clearance committee. B.V.V.S Sajjalashree Institute of nursing sciences Navanagar Bagalkot. Written consent of participation obtained from participants before the data collection.
Statistical Analysis:

- **Percentage, mean, median and standard deviation** will be computed.
- **Paired't' test:** To analyze Pre test – Post Test difference in the experimental and control group.
- **Independent't' test:** To analyze the difference between experimental and control groups.
- **Chi square test:** To analyze association between selected socio-demographic and clinical characteristics and symptom experience, quality of life and selected psychosocial parameters of Postmenopausal women.
- **RM-ANOVA:** To identify the mean difference in the score of symptom experience, selected psychosocial parameters in all the levels of assessments.

RESULTS

Results of the study is depicted as following sections;
Section 1: description of selected personal variables of both groups
I. Frequency and percentage distribution of socio demographic variables of participants of both groups
The study consisted of 40 samples, 20 samples in experimental and 20 in control group each. Participants selected socio demographic variables are tabulated in master sheet and frequency and percentage is calculated. The findings are presented as shown in following in tables.

SECTION 1: DESCRIPTION OF SELECTED PERSONAL VARIABLES OF BOTH GROUPS

I. Frequency and percentage distribution of socio demographic variables of participants of both groups
The study consisted of 40 samples, 20 samples in experimental and control group each. Participants selected socio demographic variables are tabulated in master sheet and frequency and percentage is calculated.
Socio demographic variables of the participants of the study. It reveals that,

- **Age:** Majority 12(60) of the respondents belonged to the age group of 51-55 years.
- **Education of women:** Majority 9(45%) were had primary education in experimental group and control group.
- **Education of Husband:** Majority 8(40%) were had primary education in both experimental and Control group
- **Occupation of women:** Majority of respondents 9(45%) were doing labor or coolie work in experimental group and in control group majority 10(50%) were house wife's.
- **Occupation of Husband:** Majority 10(50%) were doing labor or coolie work in experimental group and in control group majority 9(45%) were doing labor or coolie work.
- **Religion:** Majority of respondents 16(80%) were belonged to Hindu religion in experimental group and in control group majority 17(85%) were belonged to Hindu religion.
- **Family income:** Majority of respondents 9 (45%) were had Rs.10,001-20,000 family income in experimental group and in control group majority 10(50%) were had upto Rs.10,000 family income.
- **Marital status:** Majority of respondents 15(75%) were married in experimental group and in control group majority 17(85%) were married and remaining 3(15%) were divorced or separated.
- **Type of family:** In experimental group majority 16(80%) were belonged to nuclear family and in control group majority15(85%) were belonged to nuclear family and 5(25%) were belonged to joint family.
- **Diet:** In experimental and control group majority 12(60%) were taking non vegetarian food and remaining 8(40%) were taking vegetarian food.
- **Habit of performing relaxation techniques:** In experimental group majority 17(85%) were not had habit of performing relaxation techniques and in control group majority 16(80%) were not had habit and remaining 4(20%) were habit of performing relaxation techniques.
- **Previous information on menopause:** In experimental group majority 15(75%) respondents were not had previous information on menopause and in control group majority 14(70%) were not had previous information and remaining 6(30%) were had previous information on menopause.
- **Husband's awareness of menopause:** In experimental group majority of respondents 15(75%) participants husbands were aware and in control group majority 19(95%) participants husbands were aware of menopause.
- **Level of satisfaction with married life:** In experimental group majority of respondents 12(60%) participants were moderately satisfied with married life and in control group majority 10(50%) participants were moderately satisfied with married life.
- **Experience of stress event in last one year:** In experimental group majority of respondents 4(20%) participants were had a stress due to death of loved one and each1(5%) were had a stress due to loss of house and children gone away from home.

Control group: Majority 5(25%) participants were had a stress due to death of loved one and 2(10%) were had a stress due to children gone away from home.

SECTION 2: EFFECTIVENESS OF INTEGRATED COMMUNITY BASED NURSING INTERVENTION

Part A: Description regarding participant's depression scores
I. Description of participant's depression scores

TABLE 1: Mean, Median, mode, standard deviation and range scores of all tests regarding depression scores. N:20+20

GROUP	Time of test	Mean	Median	Mode	Sd	Range
Experimental group	Pretest	24.50	23.50	16	7.08	13-42
	Post test 1-Day 30	20.25	20.50	14	5.63	10-31
	Post test 2-Day 60	20.10	20.50	14	5.73	10-31
	Post test 3-Day 90	20.05	20	14	5.73	10-31
Control group	Pretest	24.20	23.50	19	7.16	14-43
	Post test 1-Day 30	24.15	23.50	19	7.02	14-42
	Post test 2-Day 60	24.30	23.50	19	7.32	14-43
	Post test 3-Day 90	24.35	23.50	19	7.30	14-43

Pretest scores: Among the Experimental group, the depression scores mean scores at the time pretest was 24.50, median was 23.50, mode was 16 with standard deviation ±7.08 and scores ranged between 13.42. Among the participants of Control group, the depression score mean was 24.20, median was 23.50, mode was 19 with standard deviation ±7.16 and scores ranged between 14-43.

Post test 1-Day 30 scores: Among the Experimental group, the depression scores mean scores in day 30 was 20.25, median was 20.50, mode was 14 with standard deviation ±5.63 and scores ranged between 10-31.

II. Description of participant's levels of depression scores

The depression scores in all tests of experimental and control groups according to level of depression is calculated and their Frequency and percentage is presented in the Table 1

TABLE: 2: Depression scores among participants of experimental and control groups. N:20+20

Time of test	Level of depression					
	Experimental group			Control group		
	No Depression	Mild level	Moderate level	No Depression	Mild level	Moderate level
	f (%)	f(%)	f(%)	f(%)	f(%)	f(%)
Pretest	3 (15)	14 70)	3 (15)	2 (10)	15 (75)	3 (15)
Post test 1-Day 30	6 (30)	14 (70)	00	2 (10)	15 (75)	3 (15)
Post test 2-Day 60	6 (30)	14 (70)	00	2 (10)	15 (75)	3 (15)
Post test 3-Day 90	6 (30)	14 (70)	00	2 (10)	15 (75)	3 (15)

The data presented in the Table 2 revels the depression of the participants, it shows that,

Experimental group: In **pretest**, majority14 (70%) were had mild level, each 3(15%) were had no depression and moderate level depression. In **post test 1**,**posttest 2 and 3**majority14(70%) were had mild level and 6(30%) were had no depression

Control group: In **pretest and all posttests**, majority15 (75%) were had mild level, 3(15%) were had moderate level and remaining 2(10%) were not had depression.

III. Significance of difference in depression scores during each test among the participants of experimental and control group.

H_{05}: There will be no significant difference between the mean each test depression scores of participants who have received integrated community-based nursing intervention.

Table:3: Comparison of each test mean depression scores among Experimental group. N:20+20

Aspects	Depression scores		Paired t Value	P value
	Mean difference	SD difference		
Pretest-Post test 1	4.25	±1.45	5.83	0.001*
Post test 1-Post test 2	0.15	±0.10	1.83	0.080
Post test 2-Post test 3	0.05	±0.01	1.00	0.330

*significant at 0.05 levels

The data presented in Table 3 shows that in Experimental group the mean difference between the pretest and post test 1depression scores score is 4.25, between post test 1 to post test 2 is 0.15 and post test 2 to post test 3 is 0.05. This indicates a slight decrease in depression scores after undergoing integrated community-based nursing intervention.

To find significance of the difference in depression scores **paired t** test value was computed and the obtained value of 't'= 5.83 (pretest to post test 1) with p value 0.001 is found significant; 1.83 (between post test 1 to post test 2)with p value 0.080 is not found significant and 1.00 (between post test 2 to post test 3) with p value 0.330 is found not significant at 0.05 level of significance, indicating that the integrated community based nursing intervention has helped participants to lower their depression scores from pretest to post test 1 and is sustained in post test 2 and post test 3.

Hence the null hypothesis H_{05} is not supported and research hypothesis is supported indicating that the decrease in depression after undergoing integrated community based nursing intervention and it was sustained even after 60 days and 90 days of pretest.

Table:4: Comparison of each test mean depression scores among Control group N:20+20

Aspects	Depression scores		Paired t Value	P value
	Mean difference	SD difference		
Pretest-Post test 1	0.05	±0.14	1.00	0.330
Post test 1-Post test 2	0.15	±0.30	1.37	0.180
Post test 2-Post test 3	0.05	±0.02	1.00	0.330

*significant at 0.05 levels

The data presented in Table 4 shows that in control group the mean difference between the pretest and post test 1depression scores score is 0.05, between post test 1 to post test 2 is 0.15 and post test 2 to post test 3 is 0.05. This indicates a no difference in depression scores among the participants of control group.

To find significance of the difference in depression scores **paired t** test value was computed and the obtained value of 't'= 1.00 (pretest to post test 1) with p value 0.330 is found not significant; 1.37 (between post test 1 to post test 2)with p value 0.180 is not found significant and 1.00 (between post test 2 to post test 3) with p value 0.330 is found not significant at 0.05 level of significance, indicating that no significant decrease in the their depression scores from pretest to post test 1, 2 and 3.

Hence the null hypothesis H_{05a} is supported and research hypothesis is supported indicating that no significant change in depression among the participants of control group from pretest to post tests.

IV. Significance of difference in depression scores during each test between the participants of experimental and control group.

H_{06}: There will be no significant difference between mean depression scores during each test between participants of experimental and Control groups at 0.05 levels of significance.

The data presented in the Table:5 shows that the mean difference between experimental and control group, in **pretest** is 0.30, in **post test 1-day 30** is 2.02, in **post test 2-day 60** is 4.20 and in **post test 3-day 90** is 4.30. To find significance of the difference in depression scores independent t test value was computed and the obtained value of 't' = 0.13 with p value 0.895 on pretest is found not significant, ' t' = 2.10 with p value 0.051 on **post test 1-day 30** is found significant, ' t' = 2.01 with p value 0.041 on **post test 2-day 60** is found significant and 't' = 2.07 with p value 0.045 on **post test 3-day 90** is found significant.

Table:5: Comparison of each test mean depression scores between Control group. N:20+20

Groups	Mean	Mean difference	Independent t Value	P value
Pretest Exp Group Control group	24.50 24.20	0.30	0.13	0.895
Day 30 Exp Group Control group	20.25 24.15	2.02	2.10	0.051*
Day 60 Exp Group Control group	20.10 24.30	4.20	2.01	0.041*
Day 90 Exp Group Control group	20.05 24.35	4.30	2.07	0.045*

*Significant

It indicates that, that the integrated community-based nursing intervention was helped participants of Experimental group to lower their depression scores was sustained for day 30, day 60 and day 90.

Hence with respect to **pretest** scores the hypothesis**H_{04} is supported** indicating no significant difference in depression scores between two groups and with respect to **Post test 1, post test 2 and post test 3** the hypothesis **H_{06}rejected** indicating significant differences in depression scores between participants of experience group and control group. As mean values of experimental group are lower than control group, the participants of experimental group experienced improved depression than control group.

Part D: Description regarding participant's anxiety scores

I. Description of participant's anxiety scores

The all tests anxiety scores obtained by the participants were tabulated to a master data sheet and the total scores obtained by each participant in the all tests were tabulated. Mean, standard deviation, median and range of all tests were computed. The findings were presented in the Table: 6.

TABLE 6: Mean, Median, mode, standard deviation and range scores of all tests regarding anxiety scores. N:20+20

GROUP	Time of test	Mean	Median	Mode	Sd	Range
Experimental group	**Pretest**	9.95	10	12	2.99	4-16
	Post test 1-Day 30	7.45	7	6	2.72	3-14
	Post test 2-Day 60	7.20	7	9	2.68	3-14
	Post test 3-Day 90	7.15	7	9	2.71	3-14
Control group	**Pretest**	10.50	11	11	3.96	3-19
	Post test 1-Day 30	10.55	11	11	3.99	3-19
	Post test 2-Day 60	10.50	11	11	3.88	3-18
	Post test 3-Day 90	10.40	11	11	3.84	3-18

The data presented in Table:6 shows that-

Pretest scores: Among the Experimental group, the anxiety scores mean scores at the time pretest was 9.95, median was 10, mode was 12 with standard deviation ±2.99 and scores ranged between 4-16. Among the participants of Control group, the anxiety score mean was 10.50, median was 11, mode was 11 with standard deviation ±3.96 and scores ranged between 3-19.

Post test 1-Day 30 scores: Among the Experimental group, the anxiety scores mean scores in day 30 was 7.45, median was 7, mode was 6 with standard deviation ±2.72 and scores ranged between 3-14. Among the participants of Control group, the

score mean was 10.55, median was 11, mode was 11 with standard deviation ±3.99 and scores ranged between 3-19.

II. Description of participant's levels of anxiety scores

The anxiety scores in all tests of experimental and control groups according to level of anxiety are calculated and their Frequency and percentage is presented in the Table 7.

TABLE:7: Anxiety scores among participants of experimental and control groups. N:20+20

Time of test	Level of anxiety							
	Experimental group				Control group			
	Mild	Moderate level	Severe level	Very severe	Mild	Moderate level	Severe level	Very severe
	f (%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)	f(%)
Pretest	1(5)	10(50)	8(40)	1(5)	2(10)	15(75)	3(15)	00
Post test 1-Day 30	4(20)	14(70)	2(10)	00	2(10)	15(75)	3(15)	00
Post test 2-Day 60	5(15)	13(65)	2(10)	00	2(10)	15(75)	3(15)	00
Post test 3-Day 90	5(15)	13(65)	2(10)	00	2(10)	15(75)	3(15)	00

Experimental group: In **pretest**, majority10 (50%) were had moderate level, 8(40%) were had severe level and each 1(5%) were had very severe level of anxiety. In **post test 1** majority14 (70%) were had moderate level, 4(20%) were had mild level and 2(10%) were had severe level of anxiety.

Control group: In **pretest and all posttests**, majority15 (75%) were had moderate level, 3(15%) were had severe level and remaining 2(10%) were had mild levels of anxiety.

III. Significance of difference in anxiety scores during each test among the participants of experimental and control group.

H_{07}: There will be no significant difference between the mean each test anxiety scores of participants who have not received integrated community based nursing intervention

Table:8: Comparison of each test mean anxiety scores among Experimental group

N:20+20

Aspects	Anxiety scores		Paired t Value	P value
	Mean difference	SD difference		
Pretest-Post test 1	2.50	±0.27	12.58	0.000*
Post test 1-Post test 2	0.25	±0.04	1.51	0.09
Post test 2-Post test 3	0.05	±0.03	1.00	0.330

*significant at 0.05 levels

The data presented in Table 8 shows that in Experimental group the mean difference between the pretest and post test 1anxiety scores score is 2.50, between post test 1 to post test 2 is 0.25 and post test 2 to post test 3 is 0.05. This indicates a slight decrease in anxiety scores after undergoing integrated community-based nursing intervention.

To find significance of the difference in anxiety scores**paired t** test value was computed and the obtained value of 't'= 12.58 (pretest to post test 1) with p value 0.000 is found significant; 1.51 (between post test 1 to post test 2)with p value 0.090 is not found significant and 1.00 (between post test 2 to post test 3) with p value 0.330 is found not significant at 0.05 level of significance, indicating that the integrated community based nursing intervention has helped participants to lower their anxiety scores from pretest to post test 1 and is sustained in post test 2 and post test 3.

Hence the null hypothesis H_{07} is not supported and research hypothesis is supported indicating that the decrease in anxiety after undergoing integrated community based nursing intervention and it was sustained even after 60 days and 90 days of pretest.

Table :9 Comparison of each test mean anxiety scores among Control group

N:20+20

Aspects	Anxiety scores		Pairedt Value	P value
	Mean difference	SD difference		
Pretest-Post test 1	0.05	±0.03	1.00	0.330
Post test 1-Post test 2	0.05	±0.11	1.00	0.330
Post test 2-Post test 3	0.10	±0.04	1.45	0.163

*significant at 0.05 levels

The data presented in Table 9 shows that in control group the mean difference between the pretest and post test 1anxiety scores score is 0.05, between post test 1 to post test 2 is 0.05 and post test 2 to post test 3 is 0.10. This indicates a no difference in anxiety scores among the participants of control group.

To find significance of the difference in anxiety scores **paired t** test value was computed and the obtained value of 't'= 1.00 (pretest to post test 1) with p value 0.330 is found not significant; 1.00 (between post test 1 to post test 2)with p value 0.330 is not found significant and 145 (between post test 2 to post test 3) with p value 0.163 is found not significant at 0.05 level of significance, indicating that no significant decrease in the their anxiety scores from pretest to post test 1, 2 and 3.

Hence the null hypothesis H_{07a} is supported and research hypothesis is supported indicating that no significant change in anxiety among the participants of control group from pretest to post tests.

IV. Significance of difference in anxiety scores during each test between the participants of experimental and control group.

To find out the significance of difference between means of anxiety scores in each test, independent t test was computed. The data are presented in Table 10. To test statistical significance following null hypothesis was stated:

H_{08}: There will be no significant difference between mean anxiety scores during each test between participants of experimental and Control groups at 0.05 levels of significance.

Table:10: Comparison of each test mean anxiety scores between Control group N:20+20

Groups	Mean	Mean difference	Independent t Value	P value
Pretest Exp Group Control group	9.95 10.50	0.55	0.49	0.624
Day 30 Exp Group Control group	7.45 10.55	2.86	2.10	0.007*
Day 60 Exp Group Control group	7.20 10.50	3.30	3.12	0.003*
Day 90 Exp Group Control group	7.15 10.40	3.08	2.07	0.004*

*Significant

The data presented in the Table:10 shows that the mean difference between experimental and control group, in **pretest** is 0.55, in **post test 1-day 30** is 2.86, in **post test 2-day 60** is 3.30 and in **post test 3-day 90** is 3.08. To find significance of the difference in anxiety scores independent t test value was computed and the obtained value of 't' = 0.49 with p value 0.624 on pretest is found not significant, ' t' = 2.10 with p value 0.007 on **post test 1-day 30** is found significant, ' t' = 3.12 with p value 0.003 on **post test 2-day 60** is found significant and 't' = 2.07 with p value 0.004 on **post test 3-day 90** is found significant.

It indicates that, that the integrated community-based nursing intervention was helped participants of Experimental group to lower their anxiety scores was sustained for day 30, day 60 and day 90.

Hence with respect to **pretest** scores the hypothesis**H_{08} is supported** indicating no significant difference in anxiety scores between two groups and with respect to **Post test 1, post test 2 and post test 3** the hypothesis **H_{08}rejected** indicating significant differences in anxiety scores between participants of experience group and control group. As mean values of experimental group are lower than control group, the participants of experimental group experienced improved anxiety than control group.

Part D: Description regarding participant's irritability scores

I. Description of participant's irritability scores

The all tests irritability scores obtained by the participants were tabulated to a master data sheet and the total scores obtained by each participant in the all tests were tabulated. Mean, standard deviation, median and range of all tests were computed. The findings were presented in the Table 11.

TABLE:11: Mean, Median, mode, standard deviation and range scores of all tests regarding irritability scores. N:20+20

GROUP	Time of test	Mean	Median	Mode	Sd	Range
Experimental group	**Pretest**	20.80	20	21	6.13	12-34
	Post test 1-Day 30	16	15	16	5.35	9-26
	Post test 2-Day 60	15.80	14	21	5.50	8-26
	Post test 3-Day 90	15.65	13.50	13	5.45	8-26
Control group	**Pretest**	21	19	19	6.39	12-34
	Post test 1-Day 30	20.95	19	19	6.36	12-34
	Post test 2-Day 60	20.85	19	19	6.49	12-34
	Post test 3-Day 90	21	19	19	6.39	12-34

Pretest scores: Among the Experimental group, the irritability scores mean scores at the time pretest was 20.80, median was 20, mode was 21 with standard deviation ±6.13 and scores ranged between 12-34.

Among the participants of Control group, the irritability score mean was 21, median was 19, mode was 19 with standard deviation ±6.39 and scores ranged between 12-34.

Post test 1-Day 30 scores: Among the Experimental group, the irritability scores mean scores in day 30 was 16, median was 15, mode was 16 with standard deviation ±5.35 and scores ranged between 9-26. Among the participants of Control group, the score mean was 20.95, median was 19, mode was 19 with standard deviation ±6.36 and scores ranged between 12-34.

II. Description of participant's levels of irritability scores

The irritability scores in all tests of experimental and control groups according to level of irritability is calculated and their Frequency and percentage is presented in the Table:12.

TABLE: 12: Irritability scores among participants of experimental and control groups. N:20+20

Time of test	Level of irritability					
	Experimental group			Control group		
	Mild	Moderate level	Severe level	Mild	Moderate level	Severe level
	f (%)	f(%)	f (%)	f(%)	f(%)	f(%)
Pretest	**2 (10)**	**15 (75)**	**3 (15)**	**3 (15)**	**14 (70)**	**3 (15)**
Post test 1-Day 30	**10 (50)**	**9 (45)**	**1 (5)**	**3 (15)**	**14 (70)**	**3 (15)**
Post test 2-Day 60	**11 (55)**	**8 (40)**	**1 (5)**	**3 (15)**	**14 (70)**	**3 (15)**
Post test 3-Day 90	**11 (55)**	**8 (40)**	**1 (5)**	**3 (15)**	**14 (70)**	**3 (15)**

The data presented in the Table: 12 revels the irritability of the participants, it shows that,

Experimental group:
In **pretest**, majority15 (75%) were had moderate level, 3(15%) were had severe level and 2(10%) were had mild level of irritability. In **post test 1** majority10(70%) were had mild level, 9(45%) were had moderate level and 1(5%) were had severe level of irritability.
Control group: In pretest and all posttests, majority14 (70%) were had moderate level and each 3(15%) were had mild level and severe level of irritability.

III. Significance of difference in irritability scores during each test among the participants of experimental and control group.
In order to find out the significance of difference between means of each test irritability scores, **paired t** value was computed. The data are presented in Table 13 and 24. To test statistical significance following null hypothesis was stated:
H_{09}: There will be no significant difference between the mean each test irritability scores of participants who have received integrated community-based nursing intervention.

Table:13: Comparison of each test mean irritability scores among Experimental group. N:20+20

Aspects	Irritability scores		Paired t Value	P value
	Mean Difference	SD Difference		
Pretest-Post test 1	4.80	±0.78	7.76	0.000*
Post test 1-Post test 2	0.20	±0.15	1.71	1.04
Post test 2-Post test 3	0.15	±0.05	1.83	0.083

*significant at 0.05 levels
The data presented in Table 13 shows that in Experimental group the mean difference between the pretest and post test 1irritability scores score is 4.80, between post test 1 to post test 2 is 0.20 and post test 2 to post test 3 is 0.15. This indicates a slight decrease in irritability scores after undergoing integrated community-based nursing intervention.
To find significance of the difference in irritability scores**paired t** test value was computed and the obtained value of 't'= 7.76 (pretest to post test 1) with p value 0.000 is found significant; 1.71 (between post test 1 to post test 2)with p value 1.04 is not found significant and 1.83. Hence the null hypothesis H_{09} is not supported and research hypothesis is supported indicating that the decrease in irritability after undergoing integrated community based nursing intervention and it was sustained even after 60 days and 90 days of pretest.

Table:14: Comparison of each test mean irritability scores among Control group N:20+20

Aspects	Irritability scores		Pairedt Value	P value
	Mean difference	SD difference		
Pretest-Post test 1	0.05	±0.03	1.00	0.330
Post test 1-Post test 2	0.10	±0.13	1.00	0.330
Post test 2-Post test 3	0.15	±0.10	1.37	0.186

*significant at 0.05 levels

The data presented in Table 14 shows that in control group the mean difference between the pretest and post test 1irritability scores score is 0.05, between post test 1 to post test 2 is 0.10 and post test 2 to post test 3 is 0.15. This indicates a no difference in irritability scores among the participants of control group.
To find significance of the difference in irritability scores **paired t** test value was computed and the obtained value of 't'= 1.00 (pretest to post test 1) with p value 0.330 is found not significant; 1.00 (between post test 1 to post test 2)with p value 0.330 is not found significant and 1.37 (between post test 2 to post test 3) with p value 0.186 is found not significant at 0.05 level of significance, indicating that no significant decrease in the their irritability scores from pretest to post test 1, 2 and 3.
Hence the null hypothesis H_{09a} is supported and research hypothesis is supported indicating that no significant change in irritability among the participants of control group from pretest to post tests.

IV. Significance of difference in irritability scores during each test between the participants of experimental and control group.
To find out the significance of difference between means of irritability scores in each test, independent t test was computed. The data are presented in Table 15. To test statistical significance following null hypothesis was stated:
H_{010}: There will be no significant difference between mean irritability scores during each test between participants of experimental and Control groups at 0.05 levels of significance.

Table:15: Comparison of each test mean irritability scores between Control group. N:20+20

Groups	Mean	Mean difference	Independent t Value	P value
Pretest Exp Group Control group	 20.80 21.00	0.20	0.10	0.920
Day 30 Exp Group Control group	 16.00 20.95	2.66	2.10	0.011*
Day 60 Exp Group Control group	 15.80 20.85	2.65	3.12	0.012*
Day 90 Exp Group Control group	 15.65 21.00	2.84	2.07	0.007*

*Significant

The data presented in the Table 15 shows that the mean difference between experimental and control group, in **pretest** is 0.20, in **post test 1-day 30** is 2.66, in **post test 2-day 60** is 2.65 and in **post test 3-day 90** is 2.84. To find significance of the difference in irritability scores independent t test value was computed and the obtained value of 't' = 0.10 with p value 0.920 on pretest is found not significant.
Association of pretest levels of symptom experience scores, quality of life, depression, anxiety and irritability levels of participants with their related personal variable was calculated using chi-square and data are presented as follows.

V. Association between participants of both group pretest levels depression scores and socio demographic variables
H_{11}: There will be no significant association between pretest levels of depression with their selected personal variables at 0.05 levels of significance

The calculated chi square values between pretest levels of depression is significantly not associated with any of the selected socio demographic variables. Hence, the null hypothesis **H_{011c} is accepted** and research hypothesis **H_{11c}** is rejected. Indicating the both group participants pretest levels of depression is significantly not associated with any of their selected socio demographic variables.

VI. Association between participants of both group pretest levels anxiety scores and socio demographic variables

H_{011}: There will be no significant association between pretest levels of anxiety with their selected personal variables at 0.05 levels of significance

The calculated chi square values between pretest levels of anxiety is significantly associated with education, occupation, type of family, number of children and diet and not significantly associated with other socio demographic variables. Hence, the null hypothesis **H_{011d}**and research hypothesis **H_{11d}** is partially supported. Indicating the both group participants pretest levels of anxiety is significantly associated with their education, occupation, type of family, number of children and diet.

VII. Association between participants of both group pretest levels irritability scores and socio demographic variables

H_{011e}: There will be no significant association between pretest levels of irritability with their selected personal variables at 0.05 levels of significance

The calculated chi square values between pretest levels of irritability is significantly associated with education and not significantly associated with other socio demographic variables. Hence, the null hypothesis **H_{011e}**and research hypothesis **H_{11e}** is partially supported. Indicating the both group participants pretest levels of irritability is significantly associated with their education.

DISCUSSION

In Experimental group **pretest scores** depicted majority14(70%) were had mild level, each 3(15%) were had no depression and moderate level depression. In **post test 1**, **posttest 2 and 3**majority14(70%) were had mild level and 6(30%) were had no depression.

Control group: In pretest and all posttests, majority15 (75%) were had mild level, 3(15%) were had moderate level and remaining 2(10%) were not had depression. In **pretest**, majority14(70%) were had mild level, each 3(15%) were had no depression and moderate level depression. In **post test 1**, **posttest 2 and 3**majority14(70%) were had mild level and 6(30%) were had no depression In **control group**: In **pretest and all posttests**, majority15(75%) were had mild level, 3(15%) were had moderate level and remaining 2(10%) were not had depression.

Results of the study was supported by a study conducted by Poorandohit A, Sedghe M, 2015 on prevalence of depression in postmenopausal women. In that study 1280 menopausal women age between 40 and 65 years were selected. The result revealed that the mean+SD score of depression for the subjects was 9.37+4.62. The results showed that 59.8% of the 1280 samples were depressed; in particulars, 39.8% had mild depression, 16% moderate depression, and 4% severe depression. There is a significant and inverse relation between variables of age, exposure to cigarette smoking, and the relationship with their spouses and the level of their depression. The result showed that the level of education was associated with depression. The highest rate of depression was in illiterate women. The study concluded that a significant percentage of women in their menopause experience depression. This preparation can be associated with personal characteristics and socio economic status.

Projected outcome: Educational interventional will be be helpful in reducing psychosocial disorders among menopausal women

CONCLUSION

WHO considers that social, psychological and physical health support during the menopausal transition and after menopause should be an integral part of health care. WHO is committed to increasing understanding of menopause by: emphasizing a life course approach to health and well-being (including sexual health and well-being), by ensuring that women have access to appropriate health information and services to promote healthy ageing and a high quality of life before, during and after menopause.

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