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PROFESSIONAL ARTICLE

Impact of Community-Based Educational Package (CBEP) on Coping Strategies Among Postmenopausal Women

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Abstract

Background/Aim: Menopause is a significant challenge for women's psychological and physical well-being. Aim of this study was to examine the impact of a 60-minute community-based educational package (CBEP) designed to enhance coping strategies among postmenopausal women in rural Punjab.

Methods: A randomised controlled trial with 200 participants (Control: n = 100; Experimental: n = 100) utilised the modified postmenopausal coping scale (PMCS)—a 55-item tool assessing nine domains, including hot flushes, psychological changes, sleep disturbances and sexual dysfunction—to evaluate coping strategies pre- and post-intervention.

Results: Baseline assessments revealed significant disparities: 60.8 % of the Control group exhibited poor coping knowledge compared to 39.2 % in the Experimental group (χ^2 = 9.684, p = 0.002). Post-intervention, the Experimental group demonstrated a marked increase, with poor coping knowledge decreasing to 8.8 % and average coping knowledge rising to 66.4 %, while the Control group remained stagnant (91.2 % low knowledge; χ^2 = 54.202, p = 0.0001). Quantitative analysis further showed significant post-intervention gains in coping scores for the Experimental group (mean = 24.92 vs Control: 17.84; t = 13.311, p = 0.0001), with a mean score increase of 6.55 compared to the Control group's 0.36 (t = 17.563, p = 0.0001).

Conclusion: Although neither group achieved "good" knowledge levels, the experimental cohort's shift from poor to average coping strategies underscores the intervention's effectiveness. These results highlight the value of structured, community-driven educational programs in empowering postmenopausal women to manage menopausal challenges, ultimately enhancing their quality of life.

Key words: Community-based educational package; Coping skills; Knowledge; Postmenopause; Women; Menopause; Quality of life.

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Introduction

Menopause represents a transition into a new stage of life. It commences with the cessation of the menstrual cycle. It is not classified as a health quandary and many individuals perceive it as a period of newfound freedom. Nonetheless, the accompanying hormonal fluctuations and various influencing factors may lead to discomfort. Menopause conventionally occurs aged 40 to 58 years in industrialised nations, with a mean age of 51. In certain cases, it may arise earlier due to

a medical condition or interventions, such as the menopause. Postmenopausal women often use coping strategies to manage these indicators and improve their overall well-being.

Menopause, a crucial life transition characterised by various physiological and psychological changes, signifies the cessation of menstruation.[1] Common indicators of menopause include mood swings, insomnia, hot flushes and sleep sweats.[2-9] Typically, affecting women among ages of 45 and 55, these indicators can put significant impact on woman's coping strategies and overall well-being, including her physical, psychological and social health.[10, 11]

The postmenopausal stage is a critical phase in a woman's life, influenced by various factors including socio-demographics, lifestyle, psychological condition, limited knowledge, negative attitudes, inadequate coping strategies and the nature of her relationships. These elements altogether affect the extent of menopausal symptoms and overall quality of life.[12-14]

Moshki and Mohammadzadeh conducted a randomised controlled study in Iran to evaluate the effects of a group-based educational program on self-efficacy and self-acceptance among women with menopause. Using the preceding-proper model, the study revealed that educational intervention remarkably increased the knowledge and performance of participants related to self-efficacy and self-acceptance.[15]

Rathnayake et al examined the effects of postmenopausal well-being workshops on choices of healthy lifestyle. The intervention group, which underwent lifestyle changes for 8 weeks, demonstrated better understanding and attitudinal scores during the follow-up phase. The study emphasised the effectiveness of educational interventions in increasing lifestyle choices among postmenopausal women.[16]

Manjula and Kalavathi evaluated the efficacy of an informative pamphlet on menopausal concerns and coping strategies among postmenopausal women. Using an experimental design, the study found that health education significantly increased participants' knowledge of menopausal indicators. The findings showcased the importance of intervention of education in improving women's understanding of menopause.[17]

Descriptive research by Sophia aimed to identify commonly reported menopause symptoms and coping strategies among postmenopausal women. The study concluded that improving menopause health and the application of coping strategies, including social bonds, was necessary to improve women's behaviours during this phase.[18]

Kaur investigated on biopsychosocial challenges and coping strategies in postmenopausal women belongs to rural areas. Most participants reported moderate psychosocial problems and a significant percentage were not properly facing these challenges. The study emphasised the importance of education and support to help women manage the difficulties associated with menopause.[19]

Roy et al conducted a survey on postmenopausal symptoms and coping strategies midst women of the Delhi-NCR region. The study revealed that the most of women have experienced a number of symptoms, from exhaustion and insomnia to more severe problems such as anxiety attacks and rheumatic pains. Common coping strategies included lifestyle changes and social interactions, while hormone replacement therapy was less used.[20]

Agarwal examined the clinical manifestations of menopause and coping strategies in middle -aged women. The study identified rheumatic difficulties, fatigue and sleep as widespread symptoms, with psychological symptoms such as fear and discomfort also reported. The results emphasised the variability at the beginning of symptoms and the importance of personalised coping strategies.[21]

Shivaji conducted research among post -female women in a tribal area to examine psychological issues and coping strategies. The study revealed a strong association in the midst of psychological issues and coping strategies, with most women experiencing mild to moderate psychological symptoms. However, only a small proportion of women adopted coping strategies to relieve these symptoms.[22]

Itti and Deelip conducted a review study on coping strategies in menopause women. The study emphasised the importance of a healthy diet, exercise and yoga in managing menopause symptoms. In addition, interventions in health educa-

tion were identified as effective techniques for improving women's ability to deal with menopause symptoms.[23]

Alazawa et al revealed that 60–70 % of participants reported moderate-to-severe symptoms, with common coping mechanisms including social support, lifestyle adjustments and religious practices. Cultural factors, such as familial roles and societal expectations, strongly influenced coping approaches. Limitations include the cross-sectional design, which precludes causal inferences.[24]

Study by Zahan et al highlighted higher prevalence of psychological symptoms (eg anxiety, mood swings) linked to socioeconomic stressors. Coping strategies emphasised healthcare utilisation and peer networks, contrasting with Jordanian reliance on familial support. The study underscores regional disparities in symptom management and resource access. Limitations include potential selection bias due to hospital-based sampling.[25]

Angco meta-synthesis identified themes of stigma, inadequate workplace accommodations and emotional labour. Women often hid symptoms or reduced work hours due to lack of support. The study advocates for policy reforms, such as flexible schedules and menopause education programs. As a meta-synthesis, its strength lies in thematic depth, though it is constrained by the quality of included studies.[26]

The reviewed studies collectively indicate that coping strategies are crucial in managing menopausal symptoms among postmenopausal women. Commonly employed strategies include social support, lifestyle changes, education, exercise and healthy behaviours. Despite this, further research and interventions are needed to encourage the adoption of effective coping strategies and enhance the overall well-being of women during the menopausal transition. Healthcare-professionals can play a crucial role in providing education and support to women to develop and implement appropriate coping strategies tailored to their individual needs.

Aim of this study was to assess the pre-test and post-test levels of coping strategies among postmenopausal women in the experimental and Control group; to develop and implement community based educational package (CBEP) on coping strategies regarding care of postmenopausal symptoms and to evaluate the effectiveness of CBEP on coping strategies among postmenopausal women in the experimental and Control group.

Methods

The study involved postmenopausal women from four rural areas in Punjab: Villages Khanpur, Badali, Sante Majra and Pir Sohana. Participants were required to be among 40 and 60 years old, have experienced menopause, be inclined to participate in the study and understands Punjabi language. Women were excluded if they were undergoing abnormal menopause, had a hysterectomy, were on anxiolytics or antidepressants, or had serious illnesses. The research design included an Experimental group and a Control group, designated as E(R) and C(R), respectively (Table 1).

Table 1: Research design of pre-test/post-test

Group	Pre test Day 1-4	CBEP intervention, recreational activities and refreshment (Day 5-6)	Post-test after 20 days (Day 27-30)
E (R)	E-K1		E-K2
	E-A1		E-A2
	E-Q1	E-X1	E-Q2
	E-S1		E-S2
	E-C1		E-C2
C (R)	C-K1		C-K2
	C-A1		C-A2
	C-Q1	---	C-Q2
	C-S1		C-S2
	C-C1		C-C2

R: Random assignment; E: Experimental group; C: Control group; K1: Pre-test assessment of knowledge; A1: Pre-test assessment of attitude; Q1: Pre-test assessment of quality of life (QoL); S1: Pre-test assessment of stress; C1: Pre-test assessment of coping; X1: Implementation of community based educational package (CBEP); K2: Post-test assessment of knowledge; A2: Post-test assessment of attitude; Q2: Post-test assessment of QoL; S2: Post-test assessment of stress; C2: Post-test assessment of coping.

A consort diagram (Figure 1) provides a visual summary of how participants move through a research study and ensure openness and clarity. In this study, 200 postmenopausal women from the Kharar block were randomly allocated either the experimental or Control group through a lottery-based method. The Experimental group (Badali and Khanpur villages, 100 women) received a 60-minute CBEP using flashcards and brochures focused on physical, psychological and

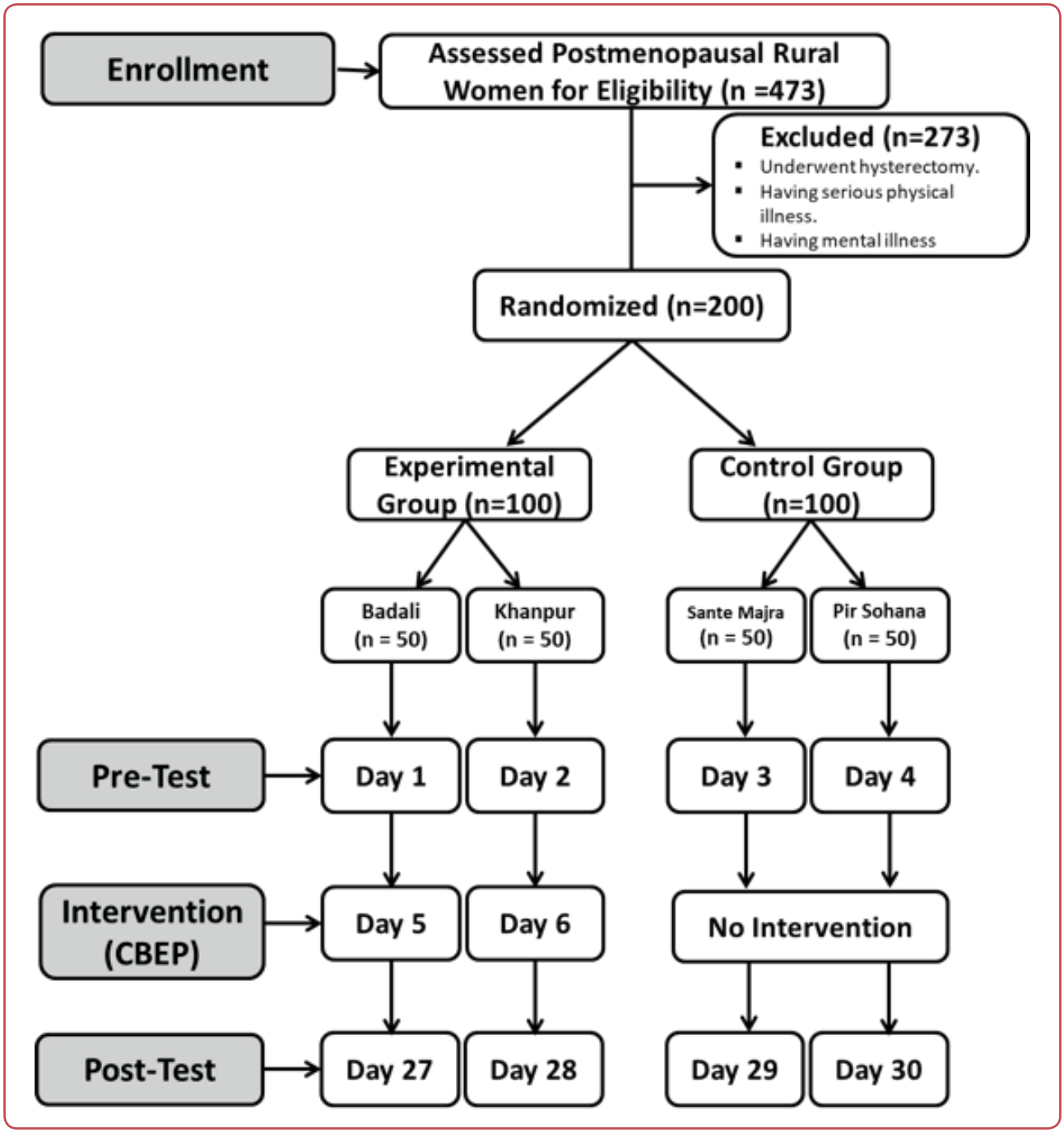

Figure 1: Consort diagram

sexual health. The Control group (villages Sante Majra and Pir Sohana, 100 women) got no intervention.

Independent variable was CBEP and socio-demographical variables. Coping among postmenopausal women was the dependent variable in this study. The study population for the current study were postmenopausal women who fulfil the inclusion criteria and were selected as sample. The sample size was 200 postmenopausal women; 100 menopausal women were included in Experimental group and 100 were included the Control group. Fifty menopausal women were taken from each selected village (Figure 2).

Randomisation was done in three stages:

Stage I: The investigator has identified Mohali district and it has 4 community developmental blocks namely Dera Bassi, Kharar, Majri. The investigator randomly selected Kharar block adopting lottery method and the administrative permission was obtained from the authority.

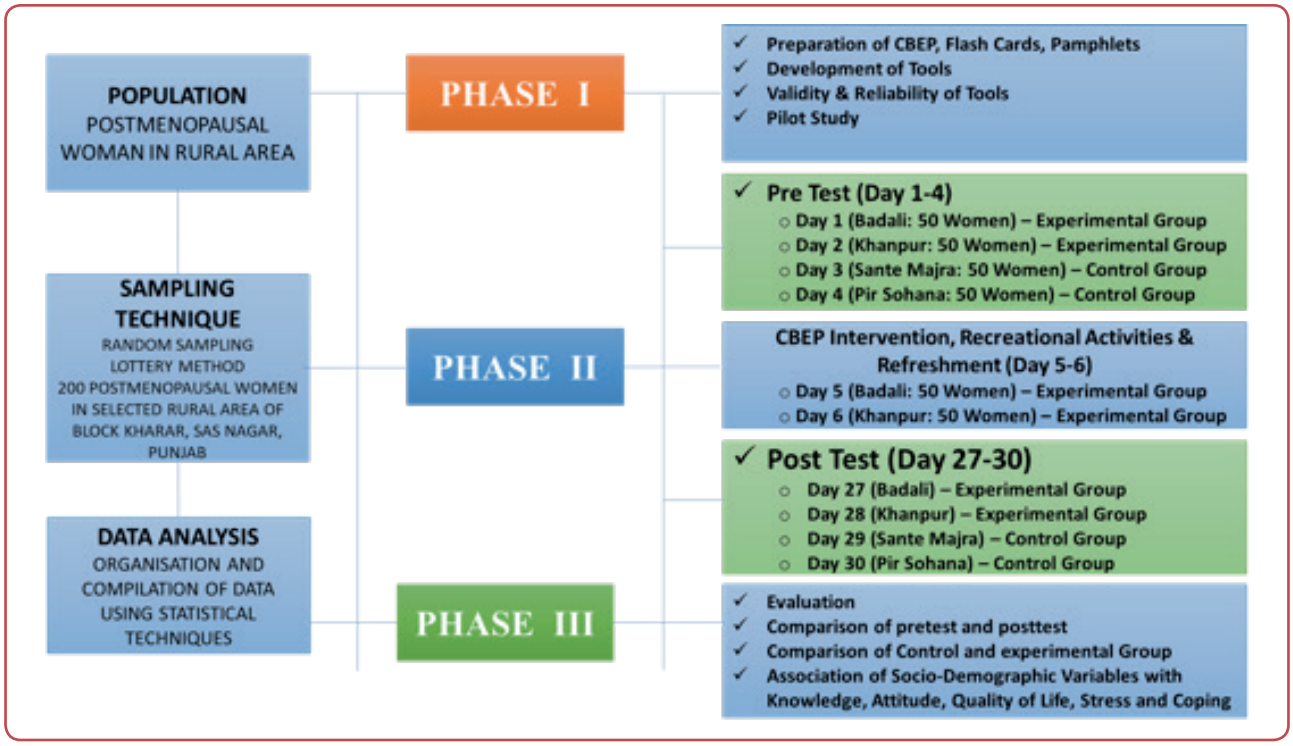

Figure 2: Research design

Stage II: The Kharar block has 154 villages. Among 154 villages, the investigator was randomly allocating (randomisation) two villages (Badali and Khanpur) for Experimental group and two villages (Sante Majra and Pir Sohana) for Control group respectively.

Stage III: Formal approval from the village administration was acquired in the respective villages. The total number of postmenopausal women in each village was identified with help of ANM and ASHA to make sampling frame. To maintain equal number of sample size among clusters, investigators used cluster sampling technique. Further, investigator was chosen simple random sampling method (computer generated random number table) to select the postmenopausal women from the sampling frame.

Tools employed

The socio-demographic profile variables included participants' age, religion, educational status, occupation, monthly family income, type of family, eating habits, sources of health information, age at menopause and duration since menopause.

Modified post-menopausal coping scale (PMCS) – A checklist to assess the level of coping strategies to overcome stress among postmenopausal women comprised a total of 55 statements that were developed was stratified into 9 main domains; they were: Hot flushes - 10 items (1–10), Urinary changes – 4 items (11-14), Psychological and mood changes – 11 items (15 – 25), Sleep disturbances – 7 items (26 – 32), Skin changes – 5 items (33 -37), Sexual dysfunction after menopause – 5 items (38 – 42), Breast problems – 6 items (43 - 48), Risk of skeletal problems – 4 items (49 – 52) and Risk of heart diseases after menopause – 3 items (53 – 55), respectively. The checklist was in Yes or No form. The score for "Yes = 1" was given to positive coping and the negative statement "No = 0" score was given.

Procedure

On day 1, the pre-test was conducted on both the groups E(R) and C(R) using the post-menopausal coping scale and socio-demographic profile tool and data was collected using the interview technique. A CBEP was designed following a thorough review of the literature and content validation by experts from nursing, gynaecology, social and preventive medicine, yoga and meditation and dietetics. It refers to the physical, sexual and psychological care teaching given to postmenopausal women through flashcards and pamphlets. Physical care included nutrition, exercise, vitamin D and calcium supplements, hormone replacement treatment and other medications. Sexual care included care of postmenopausal women regarding

the prevention of vaginal dryness and physical intimacy. Psychological care included emotional support, yoga and meditation to maintain mental health. CBEP was developed in English and then translated into Punjabi as the participants were Punjabi-speaking. CBEP was checked for its content and language validity using translation and back-translation methods.

On day 2, the CBEP was administered to the participants of E(R) only for 60 minutes and the authors clarified doubts. No intervention was given to participants of C(R). On day 26 post-test was conducted from the both the groups E(R) and C(R) using the same PMCS.

The data was analysed using SPSS 16. Descriptive statistics, such as frequency distributions, means and standard deviations, were employed to assess participant characteristics. For quantitative data analysis, paired and independent t-tests were applied, while qualitative data were assessed using the t-test for group comparisons. Specifically, the t-test was used to compare the menopause coping level scores among intervention and Control groups. Statistical significance was set at a p-value of less than 0.05.

Results

The sample size for this study consisted of 200 postmenopausal women. There were 100 women in the Control group and 100 in the Experimental group.

The results indicating that there was no significant difference in coping scores among two groups before the intervention (Student t-test, t = 1.751, p = 0.081). Post-test coping scores revealed a notably significant increase in coping scores for the Experimental group in comparison to the Control group (Student t-test, t = 13.311, p = 0.0001) (Figure 3).

The Experimental group (6.55 ± 3.43) had significantly better coping scores (mean gain) compared to the Control group (0.36 ± 0.82). The intervention played an important role in improving coping ability (t = 17.56, p = 0.0001) (Figure 4).

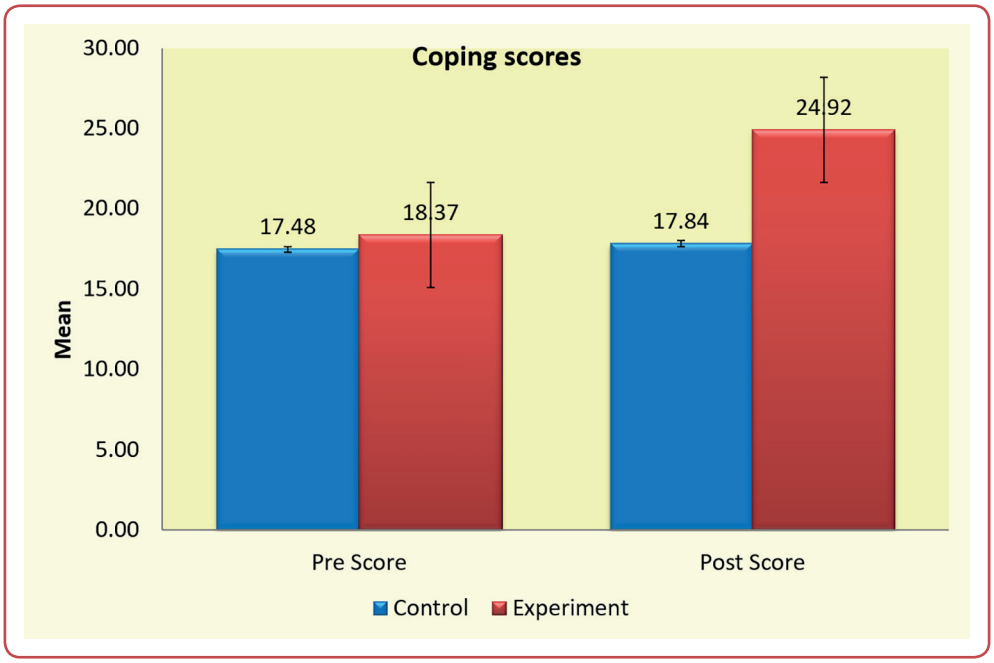

Figure 3: Coping score levels among post-menopausal women in Control and Experimental group

In Control group 62 % of menopausal women had poor coping knowledge and 38 % had average coping knowledge. In Experimental group 40 % had poor knowledge and 60 % had average knowledge and no participant with good knowledge (Chi-square test, χ^2 = 9.684, p = 0.002). Post-intervention coping knowledge levels revealed highly significant differences among Control and Experimental groups (χ^2 = 54.202, p = 0.0001). Only 5 % in Experimental group had poor knowledge compared to 40 % in Control group. Still, no participants had good knowledge. This shows the positive effect of the intervention in improving coping knowledge among the Experimental group (Figure 5).

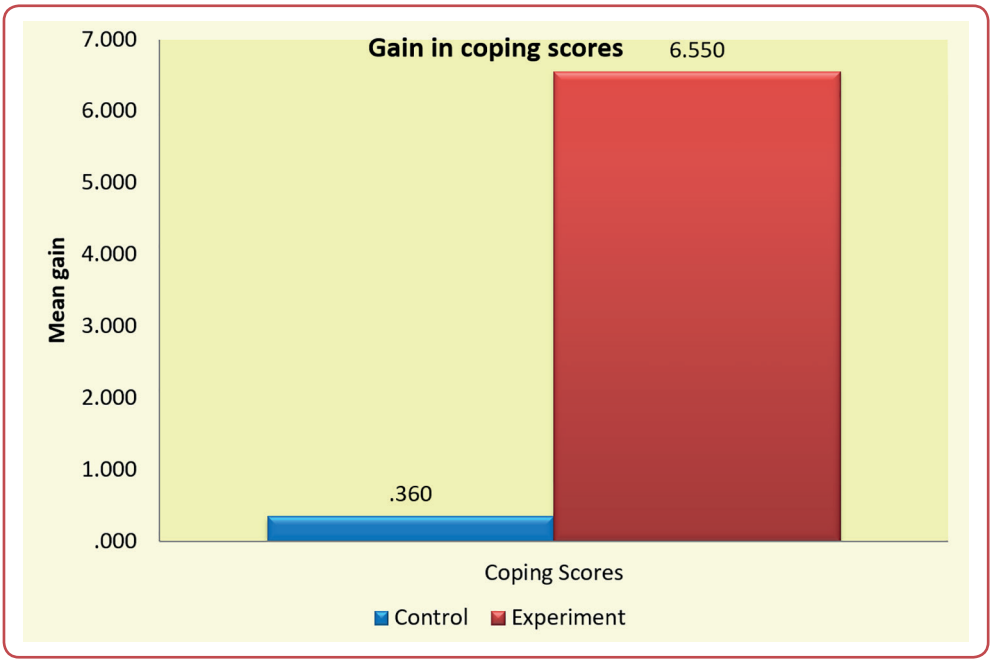

Figure 4: Gain in coping scores among postmenopausal women in Control and Experimental group

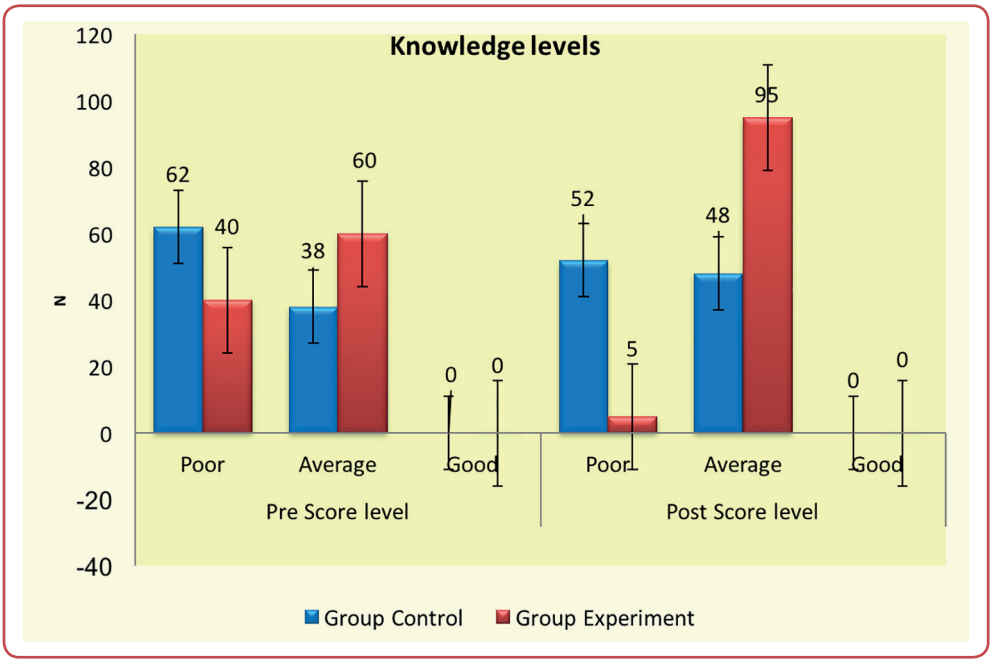

Figure 5: Effect of interventional package on coping knowledge levels of postmenopausal women

Discussion

The study's results highlight notable differences in coping strategies among control and Experimental groups. Initially, the Experimental group had slightly higher mean coping scores (mean = 18.370) compared to the Control group (mean = 17.480), though this difference was not statistically significant. This indicates that both groups had similar coping levels before the intervention. Following the intervention, the Experimental group exhibited a significantly higher mean coping score (mean = 24.920) compared to the Control group (mean = 17.840), reflecting a substantial increase in coping strategies. Additionally, the gain in coping scores from pre-test to post-test was significantly greater in the Experimental group (mean = 6.550) compared to the Control group (mean = 0.360), which confirm that the educational package significantly enhanced coping strategies.

These findings strongly showcased the effectiveness of the CBEP in enhancing coping skills among postmenopausal women. The intervention had a substantial impact on enhancing the perception of handling in Experimental group. Although the Control group has shown little change, the Experimental group showed a significant elevation in their knowledge of how to deal with the situation. With a higher proportion of menopause women, completing only a few years of knowledge, the highly significant p-value confirms the effectiveness of the interventional package in enhancing knowledge of coping skills.

Substantial increase in statistical scores of coping among the Experimental group suggests that CBEP equips menopausal women with better skills to handle challenges of postmenopausal. Despite the statistically significant improvement in scores, none of the participants reached the "good" coping knowledge level. This suggests that while the CBEP was effective but the duration of the intervention may need to be enhanced for more effective results.

Educational interventions have been found to improve their coping strategies among women in the postmenopausal stage, allowing them to manage symptoms more efficiently. A similar study by Yazdkhasti et al emphasised the meaning of health education interventions in empowerment of women with menopause and improving their coping skills. The research stressed that educational programs focused on physical activity, healthy diet, stress management and disease prevention effectively improved women's attitudes in menopause in relation to minor and their ability to manage symptoms.[27]

While the study provided valuable insights into the effectiveness of the CBEP in rural areas, its findings may not be fully generalisable to postmenopausal women in urban settings or other cultural contexts. Another limitation is the that the study focuses exclusively on women after menopause situated in rural areas and does not include premenopausal or perimenopausal women. The study evaluates the impact of specifically CBEP and does not consider other intervention methods like digital awareness programs, etc.

This study demonstrates that CBEP can play a pivotal role in enhancing coping strategies among postmenopausal women, contributing to more effective management of menopausal symptoms and an improved quality of life. The intervention resulted in a significant increase in coping scores, as evidenced by the substantial improvements observed in the Experimental group compared to the Control group. The CBEP not only enhanced participants' attitudes toward managing menopausal symptoms but also underscored the importance of effective coping mechanisms in maintaining overall well-being during this critical phase of life.

The significant differences in pre- and post-test scores, along with the notable gains in coping strategies, emphasise the effectiveness of structured educational programs in supporting postmenopausal women. These findings suggest that such community-based initiatives can play a crucial role in alleviating the adverse effects of menopause by equipping women with better coping skills and strategies.

Conclusion

The present study found that the CBEP significantly enhanced coping strategies among postmenopausal women in rural Punjab. Participants in the intervention group achieved marked gains in coping scores compared to the Control group, underscoring the value of education programs. However, the absence of participants reaching the highest coping level and the study's limited geographic scope highlight the need for more intensive or prolonged interventions.

Integrating CBEP for postmenopausal women could greatly enhance their quality of life by improving their coping skills and addressing the psychosomatic issues associated with menopause. Future research should explore the long-term benefits of such interventions and their applicability across diverse populations.

Ethics

The Institutional Ethics Committee (IEC) approved the project titled "Effectiveness of community-based educational package (CBEP) on knowledge, attitude, quality of life, stress and coping among postmenopausal women residing in the rural area of Kharar Block, Mohali, Punjab," on 12 August 2022. This approval was confirmed by Chitkara University, Punjab, in their letter No IHEC/DHR/CU/PB/22/132, dated 11 January 2023. The investigators adhered to the ethical guidelines set by the committee, ensuring the confidentiality of the data. The data was securely stored in a password-protected file.

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Conflicts of interest

The authors declare that there is no conflict of interest.

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Data access

The data that support the findings of this study are available from the corresponding author upon reasonable individual request.

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Data curation: RM
Writing - original draft: RK, RM
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