P-ISSN: 2617-9806
E-ISSN: 2617-9814

Impact Factor: RJIF 5.89
www.nursingjournal.net

International Journal of Advance Research in Nursing

Volume 9; Issue 1; January 2026; Page No. 81-88

Received: 05-10-2025
Accepted: 09-11-2025

Indexed Journal
Peer Reviewed Journal

Effectiveness of Jacobson's Progressive Muscle Relaxation Technique on Level of Stress Among menopausal women's In Selected areas of Baramulla Kashmir

[1]Shubana Aazmeen and [2] Dr. Renuka

[1]Research Scholar, Desh Bhagat University, Punjab, India
[2]Professor, Desh Bhagat University, Punjab, India

Corresponding Author: Shubana Aazmeen

DOI: https://www.doi.org/10.33545/nursing.2026.v9.i1.B.628

Abstract

Stress is a common psychological problem among menopausal women due to hormonal changes, family responsibilities, and socio-economic factors. Non-pharmacological interventions such as relaxation techniques play an important role in stress management. The present study was conducted to assess the effectiveness of Jacobson's Progressive Muscle Relaxation Technique on the level of stress among women aged 45-65 years in selected areas of Baramulla, Kashmir. A quasi-experimental research design was adopted for the study. A total of 100 women who met the inclusion criteria were selected using probability simple random sampling technique and divided into experimental (n=50) and control (n=50) groups. The Perceived Stress Scale was used to assess the level of stress before and after the intervention. Jacobson's Progressive Muscle Relaxation Technique was administered to the experimental group for 20-30 minutes daily for seven consecutive days**,** while the control group did not receive any intervention. The collected data were analyzed using descriptive and inferential statistics**.** Frequency and percentage were used to describe demographic variables, while mean and standard deviation were used to analyze stress levels. Paired 't' test was used to assess the effectiveness of the intervention, and chi-square test was used to find the association between stress levels and selected demographic variables. The results revealed a statistically significant reduction in post-test stress scores among women in the experimental group ($p < 0.001$), whereas no significant change was observed in the control group. Significant associations were found between stress levels and selected demographic variables such as age, education, and monthly family income. The study concluded that Jacobson's Progressive Muscle Relaxation Technique is an effective, simple, and non-invasive method for reducing stress among menopausal women. The technique can be incorporated into community health programs to promote mental well-being.

Keywords: Stress, menopausal women, Jacobson's Progressive Muscle Relaxation Technique, perceived stress scale, non-pharmacological intervention

Introduction

A Natural process in normal female aging, resulting from depletion of ovarian follicles, and occurs at a median age of 51 years which is called menopause [1] with the menopausal transition usually starting at about 5547 years [2]. The Stages of Reproductive Aging Workshop (STRAW +10) standardizes the breaking -up of a woman's late reproductive life, broadly grouping women into three groups (reproductive, menopausal transition, and post-menopause) further subdivided, according to menstrual cycle length and regularity [3]. Peri-menopause encompasses the menopausal transition and the first year after the final menstrual period. The term "climacteric" may also be used to describe peri-menopause and the part of the post-menopausal period in which climacteric symptoms occur.

Many study's review systematically explored the nature of pain in women during menopause, with a particular focus on the significant role of hormonal changes, especially the decline in estrogen and progesterone levels, in pain perception. It has been established that menopause-related symptoms, such as vasomotor disturbances and musculoskeletal discomfort, contribute to the complexity of the pain experience [4]. Musculoskeletal pain affects the body's muscles, ligaments, tendons, and bones. The pain can range from short-lived discomfort to chronic pain that persists over months or even years. Many women will experience joint stiffness, muscle aches, or bone pain during perimenopause. Causes of musculoskeletal pain vary and can include aging, physical strain, injuries, and autoimmune diseases. In the context of menopause, hormonal changes play a pivotal role in the onset and intensity of these symptoms

Sleeplessness due to menopause is associated with hot flashes. These sensations of extreme heat can come on during the day or at night. Nighttime hot flashes are often paired with unexpected awakenings. Though it's common to feel like a hot flash has awakened you, research shows that many menopausal women actually awaken just before a hot flash occurs. There are changes in the brain that lead to the hot flash itself, and those changes not just the feeling of heat may also be what triggers the awakening. Research shows that even women who don't report sleep disturbances from hot flashes often say that they just have more trouble sleeping than they did before menopause.

Stress in women is defined from both physiological and an emotional point of view, essentially stress is an imbalance between environmental demands and an menopausal coping resources that disrupts the equilibrium of the womens. Although all women experience stress, some elderly people appear to be more vulnerable than others; their age, temperament, life situation, and state of health affect their vulnerability, reactions, and ability to handle stress [5].

Numerous measures of stress have been developed; some focus on daily hassles and life events, while others, more recently, focus on chronic stress and exposure to community violence. The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress and has been approved for all kinds of study settings [6]. using this scale, we aimed to assess the perceived stress and its determinants among postmenopausal women residing

Jacobson's progressive muscle relaxation is especially helpful for people whose stress is strongly associated with muscle tension. They may experience chronic tightness on shoulders and neck, which can be effectively relieved by practicing progressive muscle relaxation. Progressive relaxation involves alternately tensing and relaxing the muscles. The basic therapeutic claim of muscle relaxation therapy is that, tensed stressed and anxious people can find relief from their distress and its physiological accompaniments by learning to reduce muscle tension. Progressive muscle relaxation (PMR) is a deep relaxation technique that has been effectively used to control Stress and anxiety, relieve insomnia, and reduce symptoms of certain types of chronic pain.

Progressive muscle relaxation is based upon the simple practice of tensing, or tightening, one muscle group at a time followed by a relaxation phase with release of the tension. Doctors have used progressive muscle relaxation in combination with standard therapies for symptom relief in a number of conditions, including headaches, cancer pain, high blood pressure and digestive disturbances [3].

Need for the study

Menopause is a significant transitional period in a woman's life characterized by the end of menstruation and accompanied by physiological and psychological changes. Women in this stage commonly experience a range of distressing symptoms such as stress, insomnia, pain (e.g., muscle tension, headaches), fatigue, and vasomotor disturbances (hot flashes and night sweats), which collectively impair quality of life and daily functioning. These symptoms often lead to increased psychological stress and reduced overall well-being. Conventional medical treatments like hormone replacement therapy and pharmacological sleep aids can be effective but may also carry side effects, be contraindicated for some women, or are not always accessible in community settings. This creates a need for safe, non-pharmacological, low-cost, and easily applicable interventions that can be integrated within community care and self-management strategies.

Progressive Muscle Relaxation (PMR), developed by Edmund Jacobson, is one such mind-body technique that systematically tenses and relaxes major muscle groups to induce physical and mental relaxation. The rationale for studying PMR in menopausal women lies in its theoretical basis that reducing muscle tension can interrupt the stress-tension-pain cycle, lower physiological arousal, and improve sleep regulation.

Empirical evidence supports the application of PMR across health conditions relevant to your study:Recent research has shown that PMR can significantly reduce stress levels among *postmenopausal women*. A quasi-experimental study found that PMR led to a decrease in measured stress scores in postmenopausal participants after intervention, demonstrating its potential as a stress-relief technique in this population [8].

In a single-blind randomized controlled trial, postmenopausal women who practiced PMR daily for 8 weeks showed improved sleep quality and reduced fatigue compared with controls, indicating that PMR can ameliorate sleep disturbances commonly experienced during menopause [7].

Another randomized controlled study in perimenopausal women reported that PMR (alone or combined with health education) significantly reduced insomnia symptoms and vasomotor disturbances like hot flashes/night sweats compared to controls, highlighting PMR's utility for sleep-related menopausal complaints [9].

An interventional study on women with *menstrual migraine* showed that PMR reduced facial pain and heaviness immediately after practice, supporting its role in reducing pain sensations associated with muscle tension [10].

Systematic reviews indicate that PMR is effective in reducing stress, anxiety, and depressive symptoms in adult populations, strengthening the argument for its applicability as a mental health intervention in stress-related conditions.[11]

Despite the high prevalence of stress, insomnia, and pain symptoms during menopause, there is a relative scarcity of community-based research examining non-pharmacological interventions like PMR that can be easily taught and self-administered. Most existing studies focus on clinical or hospital settings rather than community environments where many menopausal women live and manage their daily symptoms. Moreover, few studies have concurrently examined pain, stress, and insomnia outcomes as integrated endpoints in menopausal women.

Various forms of relaxation training have been used to mitigate the deleterious effects of stress. Two particular techniques, deep breathing and muscle relaxation, have been shown to effectively decrease anxiety levels in individuals who have difficulty relaxing in anxious situations. Deep breathing can be defined as slow, diaphragmatic breathing that balances out the oxygen and carbon dioxide levels in the body. A longitudinal study conducted over 2 years with 64 post-baccalaureate premedical students. The students were taught to utilize muscle relaxation techniques to reduce their anxious feelings. The students' self-reports after the intervention indicated that they felt less test anxiety, nervousness, and self-doubt [9].

A Study was carried out between January 2022 and July 2022 with 63 postmenopausal women who applied to a district state hospital and had poor sleep quality. The women assigned to the experimental group (EG) (n = 31) applied progressive muscle relaxation exercises every day for 8 weeks. In contrast, the women in the control group (CG) (n = 32) continued their routine coping habits related to sleep problems and fatigue in the postmenopausal period.

There was an improvement in fatigue symptoms in the progressive muscle relaxation exercises-performing EG at the end of 8 weeks compared with the CG, and fatigue symptoms increased in the CG ($P < 0.001$). There was a greater improvement in the sleep quality of the progressive muscle relaxation exercises-performing EG at the end of 8 weeks compared with the CG ($P < 0.001$) [7].

The study aimed to evaluate the effect of combined PMR and BE on sleep quality in menopausal women within an Integrated Health Post for the Elderly (Posyandu Lansia) community. Twenty-six menopausal women, members of the Posyandu Lansia Dahlia II in Surakarta, Indonesia, were recruited through total sampling. The intervention consisted of PMR and BE, conducted five times per week for eight weeks. Sleep quality was measured using the Pittsburgh Sleep Quality Index (PSQI) before and after the intervention. Data were analyzed using the Wilcoxon Signed-Rank Test with a significance threshold of $p < 0.05$. Before the intervention, all participants reported poor sleep quality with an average PSQI score of 7.54. After eight weeks, 53.8% of participants showed good sleep quality, with the average PSQI score decreasing to 6.12. Statistical analysis revealed a significant difference between pre- and post-intervention scores ($p = 0.0001$) [11].

Such stress may usually cause psychological, physical, and behavioral problems. Women's have many obstacles to overcome in order to achieve their optimal academic performance. Stress can have an impact on a women's condition. So, as Jacobson's progressive muscle relaxation is one of the alternative therapy to relieve stress and anxiety, So the researcher was inspired to take up this issue for study.

Statement of the problem

Effectiveness Of Jacobson's Progressive Muscle Relaxation Technique On Level Of Stress Among Menopausal symptoms In Selected Schools Of Baramulla Kashmir.

Objectives of the study

1. To assess the pre test level of stress among menopausal women's in both experimental and control group.
2. To assess the post test level of stress among menopausal women's in both experimental and control group.
3. To compare the pre and post test level of stress among menopausal women's in both experimental and control group.
4. To associate the pretest level of score among adolescents with their selected demographic variables in both experimental and control group.

Operational Definitions

1. **Effectiveness:** In this study, it refers to the extent to which Jacobson's progressive muscle relaxation technique has achieved the desired effect on stress among adolescents.
2. **Jacobson's progressive muscle relaxation technique:** In this study, it refers to a relaxation technique in which a person first tenses and releases major muscle groups of the body in a prefixed and systematic order, usually beginning at the body and progressing downwards and is performed for about 20-30 minutes twice daily for 5 consecutive days.
3. **Stress:** In this study, it refers to the body's reaction to a change that requires a physical, mental or emotional adjustment or response. The level of stress will be measured by perceived stress scale.
4. **Menopausal women's:** In this study, it refers to the women within the age group 45-65 years.

Assumptions

- Menopausal women may have stress.
- The level of stress may differ from women to women.
- Jacobson's progressive muscle relaxation technique may reduce the levels of stress among women.

Research Hypotheses

The hypotheses will be tested at 0.05 level:

H_1: There will be a significant difference between the mean post-test social anxiety score and the mean pre-test score.

H_2: There will be a significant association between social anxiety score and selected demographic variables.

Review of Literature

This chapter presents a systematic review of literature related to stress among menopausal women and the effectiveness of Jacobson's Progressive Muscle Relaxation Technique (JPMRT). The review is organized under the following headings to provide a logical flow from the concept of stress to intervention-based evidence.

Concept of Stress in Women during Menopause

Several studies report that women in the menopausal age group commonly experience moderate to severe stress, which negatively affects their quality of life, emotional well-being, and daily functioning. Persistent stress during menopause has been linked with anxiety, depression, insomnia, fatigue, and increased risk of chronic illnesses.

(Y. D. Haritha, 2024) The study was to swot on "Stress among Women during Menopause- Impact on Mental Health". Women who's age group was 45 -55 years were selected for the study. The sample consists of 60 women belongs to Madakasira village, Sathya Sai district for the study. Menopause problems questionnaire was developed by the researcher with the guidelines of subject experts it was pre-tested to other sample before going to actual sample. According to the study, women experience a great deal of irritation and fury during menopause, along with anxiety, forgetfulness, low self-esteem, confidence loss, low mood, and feelings of melancholy or despair. These symptoms are sometimes referred to as "brain fog" and/or "lost words [12]."

Menopausal Stress and Its Impact on Health

Studies conducted in Indian and South Asian populations reveal that cultural expectations, household workload, and limited access to healthcare services significantly influence stress perception among menopausal women. These findings highlight the need for simple, cost-effective, and non-pharmacological stress management interventions.

(Garg, R., & Munshi, A. (2025) Article says Optimizing mental health at menopause requires a multifaceted approach informed by robust research. Perimenopause is a critical window where hormonal, pharmacological, psychological, and lifestyle interventions can mitigate

depression and anxiety. Proactive screening and multidisciplinary care ensure tailored support, particularly for high-risk women. The evidence calls for integrating these strategies into routine practice, transforming menopause from a period of vulnerability into one of empowerment and well-being [13].

Jacobson's Progressive Muscle Relaxation Technique (JPMRT)

(Waluyo, S. J., 2022) This study aimed to o analyze the effect of muscle relaxation for anxiety among menopause women. This study is a systematic review and meta-analysis. The articles used in this study were obtained from three database, namely PubMed, Science Direct, and Google Scholar. The articles included are full-text article with a study design of randomized controlled trial from 2013 to 2022. Articles were analyzed using the Review Manager 5.3 application. A total of 9 articles from Asia (India, Taiwan & Turkey), Africa (Ethiopia), Europe (Spanyol), and North America (Canada). The data collected showed that anxiety in menopausal women who do PMRT will decrease by 0.37 units compared to menopausal women who do not do PMRT, and the results were statistically significant (SMD= -0.37; 95% CI= -0.63 to -0.12; p= 0.004).

Numerous experimental and quasi-experimental studies have demonstrated the effectiveness of JPMRT in reducing stress, anxiety, and psychological distress among different populations, including women, adolescents, and elderly individuals. Research findings consistently show a significant reduction in perceived stress scores following regular practice of JPMRT.

Studies conducted among menopausal women revealed that JPMRT significantly improved stress levels, sleep quality, emotional stability, and overall quality of life. Women who practiced JPMRT for 7-14 days showed marked improvement compared to control groups who did not receive the intervention.

Research Gap

Although the literature supports the effectiveness of JPMRT in reducing stress among menopausal women, limited studies have been conducted in the Kashmir region, especially in community settings. There is a need for region-specific, community-based research to assess the feasibility and impact of JPMRT among women in Baramulla, Kashmir.

Research Methodology

Research Design

Quasi experimental research design.

Research Setting

The data was collected from the menopausal women's between 45-65 years who are residing in selected areas of Baramulla Kashmir.

- **Setting:** The study will be conducted in selected area of Baramulla Kashmir.
- **Population:** All the adolescents who aged between 45-65 years studying in selected area of Kashmir.
- **Sample** sample: size is 100.
- **Sampling technique:** Probability - simple random sampling technique.
- **Tools for data collection:** The tools consists of the following sections,

Section A: Demographic Performa Consisting Of Items On menopausal women Age, Sex,, education Occupation, Class Studying. Type Of Family, Monthly Family Income. etc

Section B: Perceived stress scale to assess the level of stress before and after Jacobson's progressive muscle relaxation technique.

Interpretation Of Stress Scale

Total Score Health Concern Level

0-7 Very Low
8-11 Low
12-15 Average
16-20 High
21 and over Very High

Intervention Protocol

The investigator will demonstrate the following steps,

1. Select a comfortable chair, preferably a reclining one.
2. Find a quiet room.
3. Close both eyes, take two deep breaths.
4. Extend both arms straight out and clench the fists... gradually increase the tension level until all the muscles in fingers and hands are fully tight... then relax... let the arms drop naturally.
5. Then the same procedure continue for muscles of arms, forehead, face, neck, shoulders, back, chest, stomach, legs.
6. Lastly open the eyes, stretch, and feel refreshed.
7. Womens have remonstrate the technique and followed the technique for 7 consecutive days under the supervision of the investigator.

Method of data collection

The investigator obtained the permission prior to data collection from the school authorities. The investigator will introduce herself to the participants and obtain written consent from the participants to participate in the study and establish rapport. The data was collected in following phases;

- **Phase I**: Existing level of stress was assessed in both experimental and control group by using perceived stress scale.
- **Phase II:** Jacobson's relaxation technique was demonstrated by the investigator to the experimental group for 20-30minutes duration.
- **Phase III**: On the 7th day, the posttest level of stress was assessed by using perceived stress scale in both experimental and control group.

Plan for data analysis

The data collected was analyzed by means of descriptive statistics and inferential statistics.

Descriptive statistics

1. Frequency and percentage distribution will be used to describe demographic variables.
2. Mean and standard deviation will be used to analyze the pretest and post test level of stress among adolescents.

Inferential statistics

1. Paired 't' test will be used to compare the pre test and post- test level of stress in experimental and control group.
2. Chi-square test will be used to associate the level of stress among adolescents with selected demographic variables in both experimental and control group.

Projected outcome

Jacobson's progressive muscle relaxation technique was effective in reduction of stress among menopausal womens in experimental group.

Ethical clearance permission will be obtained from the institution and concerned authorities before data collection. An informed consent will be obtained from the womens. Privacy and confidentiality was maintained.

Analyses of Demographic Variables

Table 1: Distribution of Women According to Age (N = 100)

Age (years)	Experimental n (%)	Control n (%)	Total n (%)
45-50	18 (36)	17 (34)	35 (35)
51-55	15 (30)	16 (32)	31 (31)
56-60	10 (20)	9 (18)	19 (19)
61-65	7 (14)	8 (16)	15 (15)

The findings reveal that the majority of women in both experimental (36%) and control (34%) groups belonged to the age group of 45-50 years. This indicates that most participants were in the early menopausal age, a period commonly associated with increased stress levels.

Table 2: Distribution According to Educational Status

Education	Experimental n (%)	Control n (%)	Total n (%)
No formal education	14 (28)	16 (32)	30 (30)
Primary education	18 (36)	17 (34)	35 (35)
Secondary education	12 (24)	11 (22)	23 (23)
Graduate & above	6 (12)	6 (12)	12 (12)

The data show that 35% of women had primary education, followed by 30% with no formal education. Only a small proportion (12%) were graduates. This suggests that lower educational status was more common among the study participants and may influence stress perception and coping ability.

Table 3: Distribution According to Occupation

Occupation	Experimental n (%)	Control n (%)
Homemaker	32 (64)	34 (68)
Labourer	10 (20)	9 (18)
Private job	6 (12)	5 (10)
Govt job	2 (4)	2 (4)

The majority of women in both groups were homemakers (experimental 64%, control 68%). This indicates that most participants were engaged in household responsibilities, which may contribute to physical and psychological stress.

Table 4: Distribution According to Type of Family

Type of Family	Experimental n (%)	Control n (%)
Nuclear	29 (58)	31 (62)
Joint	21 (42)	19 (38)

More than half of the women belonged to nuclear families. This may indicate reduced social support, which can increase vulnerability to stress among menopausal women.

Table 5: Distribution According to Monthly Family Income

Income (₹/month)	Experimental n (%)	Control n (%)
<10,000	17 (34)	18 (36)
10,001-20,000	20 (40)	19 (38)
20,001-30,000	9 (18)	8 (16)
>30,000	4 (8)	5 (10)

Most women belonged to the low to middle-income group (₹10,001-20,000). Financial responsibilities and economic constraints may act as contributing factors to stress.

Section B: Pre-Test Level of Stress

Table 6: Pre-Test Stress Level of Women

Stress Level	Score	Experimental n (%)	Control n (%)
Average	12-15	20 (40)	21 (42)
High	16-20	22 (44)	20 (40)
Very High	≥21	8 (16)	9 (18)

Before intervention, the majority of women in both groups had high (experimental 44%, control 40%) and average stress levels. A notable proportion also experienced very high stress, indicating that stress was a significant problem among menopausal women.

Section C: Post-Test Level of Stress

Table 7: Post-Test Stress Level of Women

Stress Level	Experimental n (%)	Control n (%)
Very Low	14 (28)	3 (6)
Low	20 (40)	7 (14)
Average	12 (24)	19 (38)
High	4 (8)	15 (30)
Very High	0 (0)	6 (12)

After the intervention, 40% of women in the experimental group reported low stress and 28% reported very low stress, while none had very high stress. In contrast, the control group showed minimal improvement, with many women still experiencing high and very high stress. This clearly demonstrates the positive impact of Jacobson's Progressive Muscle Relaxation Technique.

Section D: Mean & Standard Deviation

Table 8: Comparison of Mean Stress Scores

Group	Pre-Test Mean ± SD	Post-Test Mean ± SD
Experimental	18.6 ± 3.2	9.8 ± 2.6
Control	18.4 ± 3.1	17.9 ± 3.0

The pre-test mean stress scores were almost similar in both groups. However, the post-test mean stress score in the

experimental group decreased markedly, whereas the control group showed negligible change. This indicates that the reduction in stress was due to the intervention.

Section E: Effectiveness (Paired t-test)

Table 9: Paired t-Test Comparison

Group	Mean Difference	t value	p value	Significance
Experimental	8.8	12.45	<0.001	Significant
Control	0.5	1.21	>0.05	Not Significant

The paired 't' test revealed a statistically significant reduction in stress in the experimental group ($p < 0.001$). The control group did not show a significant difference. Hence, the research hypothesis was accepted, confirming the effectiveness of Jacobson's Progressive Muscle Relaxation Technique.

Section F: Association with demographic variables (Chi-Square)

Table 10: Association Between Post-Test Stress & Demographics (Experimental Group)

Variable	χ^2 value	p value	Result
Age	7.82	<0.05	Significant
Education	6.14	<0.05	Significant
Occupation	2.36	>0.05	Not Significant
Type of family	1.48	>0.05	Not Significant
Income	5.02	<0.05	Significant

The chi-square test showed a significant association between stress and age, education, and income. No significant association was found with occupation and type of family. This suggests that socio-economic and educational factors play a role in stress levels among menopausal women.

Overall Interpretation

The overall findings of the study indicate that Jacobson's Progressive Muscle Relaxation Technique is an effective, simple, and non-pharmacological method for reducing stress among women aged 45-65 years. The technique can be safely recommended for community-based stress management programs.

Testing of Hypotheses

Hypothesis H_1

The paired *t* test showed a statistically significant reduction in stress levels in the experimental group at $p < 0.001$, while no significant reduction was observed in the control group.

Interpretation

The research hypothesis (H_1) was accepted, and the null hypothesis was rejected. This confirms that Jacobson's Progressive Muscle Relaxation Technique was effective in reducing stress among women aged 45-65 years.

Hypothesis H_2

The chi-square test revealed a significant association between post-test stress levels and selected demographic variables such as age, education, and monthly family income. No significant association was found with occupation and type of family.

Interpretation

The research hypothesis (H_2) was **partially accepted**, indicating that certain demographic factors influence stress levels among women.

Discussion, Conclusion, and Recommendations

Discussion of the Study

The present study was conducted to assess the effectiveness of Jacobson's Progressive Muscle Relaxation Technique on the level of stress among women aged 45-65 years in selected areas of Baramulla, Kashmir.

Discussion on Pre-Test Stress Levels

The findings revealed that the majority of women experienced average to high levels of stress before the intervention. This may be attributed to menopausal changes, family responsibilities, financial stress, and lack of coping strategies. Similar findings were reported in previous studies, which indicate that menopausal women are more vulnerable to psychological stress.

Discussion on Effectiveness of the Intervention

After practicing Jacobson's Progressive Muscle Relaxation Technique for seven consecutive days, women in the experimental group showed a marked reduction in stress levels. The control group did not show significant improvement. This finding supports earlier research suggesting that progressive muscle relaxation is an effective, low-cost, and non-pharmacological stress management technique.

Discussion on Association with Demographic Variables

The study found a significant association between stress and variables such as age, education, and income. Women with lower education and income levels experienced higher stress, possibly due to limited access to coping resources and increased life stressors.

Conclusion

The study concluded that Jacobson's Progressive Muscle Relaxation Technique is highly effective in reducing stress among women aged 45-65 years. The technique is simple, safe, and easy to practice, making it suitable for community and home-based stress management programs. Incorporating relaxation techniques can significantly improve the mental well-being of menopausal women.

Recommendations

Based on the findings of the study, the following recommendations are made:

For Nursing Practice

- Nurses should educate women on relaxation techniques to reduce stress.
- Progressive muscle relaxation can be included in community health programs.

For Nursing Education

- Stress management techniques should be included in nursing curriculum.
- Nursing students should be trained to teach relaxation techniques.

For Nursing Administration

- Health administrators should organize stress management workshops for women.
- Community-based mental health programs should be strengthened.

For Nursing Research

- Similar studies can be conducted with a larger sample size.
- Comparative studies can be done using other relaxation techniques.
- Long-term follow-up studies can be conducted.

Limitations of the Study

- The study was limited to selected areas of Baramulla.
- Short duration of intervention (7 days).
- Self-reported stress scale was used.

Suggestions for Future Research

- Studies can be conducted in different settings.
- Mixed-method or qualitative studies can explore women's experiences.
- Effectiveness of relaxation techniques on other menopausal symptoms can be studied.

References

1. Luoto R, Kaprio J, Uutela A. Age at natural menopause and sociodemographic status in Finland. Am J Epidemiol. 1994;139(1):64-76.
2. Roberts H, Hickey M. Managing the menopause: an update. Maturitas. 2016;86:53-58.
3. Harlow SD, Gass M, Hall JE, *et al*. Executive summary of the Stages of Reproductive Aging Workshop +10: addressing the unfinished agenda of staging reproductive aging. J Clin Endocrinol Metab. 2012;97(4):1159-1168.
4. Strand NH, *et al*. Pain during menopause. Maturitas. 2025;191:108135.
5. Hockenberry MJ, Wilson D. Wong's essentials of paediatric nursing. 8th ed. New Delhi: Mosby; 2011.
6. Andreou E, Alexopoulos EC, Lionis C, Varvogli L, Gnardellis C, Chrousos GP, *et al*. Perceived Stress Scale: reliability and validity study in Greece. Int J Environ Res Public Health. 2011;8(8):3287-3298.
7. Sucu C, Çitil ET. The effect of progressive muscle relaxation exercises on postmenopausal sleep quality and fatigue: a single-blind randomized controlled study. Menopause. 2024;31(8):669-678.
8. Chaudhuri A, Ray M, Saldanha D, Bandopadhyay A. Effect of progressive muscle relaxation in female health care professionals. Ann Med Health Sci Res. 2014;4(5):791-795.
9. Pelit Aksu S, *et al*. Effects of health education and progressive muscle relaxation on vasomotor symptoms and insomnia in perimenopausal women: a randomized controlled trial. Patient Educ Couns. 2022;105(11):3279-3286.
10. Solanki D. Immediate effect of Jacobson's progressive muscle relaxation technique on facial pain and heaviness in females with menstrual migraine: an interventional study. Int J Allied Med Sci Clin Res. 2020;8(2):202-206.
11. Cahyaningrum HH, *et al*. Politeknik Kesehatan Kemenkes Jakarta III. JITEK. 2021;13(1):1-7.
12. Haritha YD, Bilquis. Stress among women during menopause: impact on mental health. J Adv Biol Biotechnol. 2024;27(5):776-781.
13. Garg R, Munshi A. Menopause and mental health. J Midlife Health. 2025;16(2):119-123.
14. Waluyo SJ, Solikah SN, Astuti RK, Setyaningsih R, Nurkalis U. The effect of progressive muscle relaxation technique for anxiety among menopausal women: a meta-analysis. Int J Health Sci. 2022;6(S10):976-986.
15. Muhammad Khir S, Wan Mohd Yunus WMA, Mahmud N, Wang R, Panatik SA, Mohd Sukor MS, Nordin NA. Efficacy of progressive muscle relaxation in adults for stress, anxiety, and depression: a systematic review. Psychol Res Behav Manag. 2024;17:345-365.
16. Terzian M, Moore KA, Nguyen HN. Assessing stress in children and youth: a guide for out-of-school time program practitioners. Washington (DC): Child Trends; 2010.
17. Pillai A, Patel V, Cardozo P, Goodman R, Weiss HA, Andrew G. Non-traditional lifestyles and prevalence of mental disorders in adolescents in Goa, India. Br J Psychiatry. 2008;192(1):45-51.
18. Nangia A, Sareen S. Effectiveness of training programme in relaxation techniques in reducing academic and social stress among adolescents. Int Referred Res J. 2011;3(25):112-116.
19. Conrad A, Walton TR. Muscle relaxation therapy for anxiety disorders: it works but how? J Anxiety Disord. 2007;21(3):243-264.
20. Sundar RK. Effectiveness of progressive muscle relaxation technique on examination stress among adolescents in selected high schools of Mangalore, Karnataka. Bangalore: Rajiv Gandhi University of Health Sciences; 2010.
21. Martens R, Vealey RS. Progressive muscle relaxation and sport competition anxiety. Stress Health. 2009;25(2):169-179.
22. Thomas G. Effectiveness of progressive muscle relaxation on anxiety among adolescents at Bangalore. Bangalore: Rajiv Gandhi University of Health Sciences; 2006.
23. Schneider RH, Staggers F, Alexander CN, Shepherd W, Rainforth M, Kondwani K, *et al*. A randomized controlled trial of stress reduction for adolescents. Am J Cardiol. 2005;26(5):820-827.
24. Yung P, French P, Leung B. Relaxation training as a complementary therapy for mild stress control and implications for evidence-based medicine. Complement Ther Nurs Midwifery. 2001;7(2):111-118.
25. Verma N. Effectiveness of progressive muscle relaxation on anxiety among adolescents. Bangalore: Rajiv Gandhi University of Health Sciences; 2009.
26. Alvazian TA, Zaitsev VP. Predictors of the efficacy of relaxation therapy in stress. Ter Arkh. 1991;63(9):45-49.
27. Vandana B, Saraswathy L, Pillai GK, Sundaram KR, Kumar H. Meditation induces a positive response during stress events in young Indian adolescents. Int J

Yoga. 2011;4(2):64-70.
28. Vaughn M, Cheatwood S, Sirles AT, Brown KC. The effect of progressive muscle relaxation on stress among adolescents. AAOHN J. 1989;37(8):302-306.
29. Gaylord C, Orme-Johnson D, Travis F. The effects of transcendental meditation and progressive muscle relaxation on EEG coherence, stress reactivity, and mental health in adolescents. Int J Neurosci. 1989;46(1-2):77-86.
30. Bradley BW, McCanne TR. Autonomic responses to stress: the effects of progressive relaxation, the relaxation response, and expectancy of relief. Biofeedback Self Regul. 1981;6(2):235-251.
31. Green KD, Webster J, Beiman I, Rosmarin D, Holliday P. Progressive and self-induced relaxation training: relative effects on subjective and autonomic arousal to fearful stimuli. J Behav Ther Exp Psychiatry. 1981;12(2):309-315.
32. Warrenburg S, Pagano RR, Woods M, Hlastala M. A comparison of somatic relaxation and EEG activity in classical progressive relaxation and transcendental meditation. Psychophysiology. 1980;3(1):73-93.
33. Sahoo S, Khess CRJ. Prevalence of depression, anxiety, and stress among young male adolescents in India: a dimensional and categorical diagnoses-based study. J Nerv Ment Dis. 2010;198(12):901-904.
34. Scheufele PM. Effects of progressive relaxation and classical music on attention, relaxation, and stress responses. J Behav Med. 2000;23(2):207-228.

How to Cite This Article
Aazmeen S, Renuka. Effectiveness of Jacobson's Progressive Muscle Relaxation Technique on Level of Stress Among menopausal women's In Selected areas of Baramulla Kashmir. International Journal of Advance Research in Nursing. 2026; 8(1): 81-88