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The effect of acupressure at HT-7 and GV-20 points on anxiety levels among menopausal women

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Abstract

Background: Anxiety is a common psychological problem among menopausal women and may be associated with hormonal changes and psychosocial factors. Acupressure at HT-7 and GV-20 may provide a simple complementary approach to promote relaxation and reduce anxiety.

Purpose: This study aimed to determine the effect of acupressure at HT-7 and GV-20 points on anxiety levels among menopausal women.

Method: This quantitative study used a pre-experimental one-group pretest-posttest design. The study involved 21 menopausal women with mild-to-moderate anxiety who were selected using simple random sampling. Acupressure was performed at HT-7 and GV-20 once daily at night for seven consecutive days. Anxiety was assessed using the Hamilton Anxiety Rating Scale (HAM-A). Data were analyzed using the Wilcoxon Signed Rank Test.

Results: Before the intervention, 12 respondents (57.1%) experienced mild-to-moderate anxiety and 9 (42.9%) experienced mild anxiety. After seven days of intervention, 17 respondents (81.0%) were classified as having mild anxiety and 4 (19.0%) were in the lower anxiety category. The Wilcoxon Signed Rank Test showed a statistically significant difference in anxiety levels before and after the intervention ($p < 0.001$).

Conclusion: Acupressure at HT-7 and GV-20 was associated with a significant reduction in anxiety levels among menopausal women. Further controlled studies with larger samples are needed to confirm these findings.

Keywords: Acupressure; Anxiety; Menopause.

INTRODUCTION

Menopause is a natural phase in a woman's life marked by permanent cessation of menstruation following declining ovarian function. The reduction in estrogen and progesterone may affect physical and psychological conditions and is associated with symptoms such as sleep disturbance, mood changes, and anxiety (Kusumaningsih & Adyani, 2024; Hickey et al., 2024).

Anxiety during menopause may be influenced by hormonal changes, knowledge, psychological conditions, family support, and the social environment. Reduced estrogen is related to changes in neurotransmitter regulation, including serotonin and GABA, which are involved in emotional stability and may increase vulnerability to anxiety (Cho et al., 2025; Lestari & Bahrum, 2024).

Menopause is a condition which normally occurs later in a women's life (typically between 40-58 years), although it can also occur earlier as a result of surgery and treatment of various cancers. When periods stop (amenorrhoea) and have not occurred for 12 consecutive months, menopause is said to have begun the changeover time between the two being referred to as the perimenopause. During this time changes occur to the ovaries, and they alter their secretion of hormones. Changes include a reduction of oestrogen (estrogen) and progesterone, hormones that regulate menstruation and fertility. Oestrogen exists in three major forms, Estrone (E1) the primary type of Oestrogen produced after the menopause, Estradiol (E2) the main form during the reproductive years, and Estriol (E3) the prime form of Oestrogen

during pregnancy. Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH) levels increase in an attempt to compensate and stimulate the ovaries, and elevation of LH levels has been proposed as a key factor in variability of thermoregulation during menopause (Dodin et al., 2013). Estradiol reduction alters the hypothalamic thermoregulatory neurons collectively known as KNDy neurons as they produce kisspeptin, neurokinin B and dynorphin. These neurons are normally inhibited by Estradiol but this inhibition is removed during menopause (David et al., 2022).

Based on a preliminary assessment at the Elderly Posyandu of Penggung Village on 31 January 2026, 138 menopausal women were recorded. Interviews with nine menopausal women showed that five frequently felt anxious about their health. These findings indicate a need for an intervention that is simple, non-pharmacological, and feasible in a community setting.

Acupressure is a complementary intervention performed by applying pressure to specific points of the body to stimulate the nervous system and promote relaxation. HT-7 (Shenmen) is located on the inner wrist crease in line with the little finger, while GV-20 (Baihui) is located at the crown of the head along the body's midline. Previous research has reported that stimulation of these points may reduce anxiety (Agustina et al., 2023; Devi et al., 2025).

A previous randomized controlled trial reported that stimulation of HT-7 and GV-20 reduced anxiety measured using the HAM-A. Other studies have also reported benefits of acupressure for anxiety and menopausal complaints (Devi et al., 2025; Mulyandari & Trisnawati, 2024). However, evidence regarding the use of the HT-7 and GV-20 combination specifically among menopausal women in a community-based elderly posyandu remains limited.

Depression, anxiety, and stress are prevalent mental health conditions that significantly affect global well-being. Conventional treatments, including pharmacological and psychotherapeutic approaches, often have limitations. Acupressure, a Traditional Chinese Medicine (TCM) technique, has gained attention as a complementary, non-invasive therapy. Acupressure stimulates specific acupoints to balance the body's energy (Qi) and promote relaxation. This scoping review explores the effectiveness of acupressure for managing depression, anxiety, and

stress by analyzing the frequency and selection of key acupoints in randomized controlled trials (Liu et al., 2025).

RESEARCH METHOD

This study used a quantitative pre-experimental design with a one-group pretest-posttest approach. The study was conducted at the Elderly Posyandu of Penggung Village, Pacitan Regency, East Java, from May 14 to 26, 2026.

The study population consisted of 138 menopausal women. Initial screening using a screening form and the Hamilton Anxiety Rating Scale (HAM-A) identified 51 women who met the initial eligibility criteria. A sample of 24 respondents was planned using simple random sampling, including an additional 20% to anticipate dropout. Three respondents did not complete the intervention; therefore, 21 respondents were included in the final analysis.

The inclusion criteria were menopausal women with mild-to-moderate anxiety based on HAM-A assessment, able to communicate and cooperate, and willing to participate by signing informed consent. The exclusion criteria were a history of severe psychiatric disorders, routine use of anxiolytic or antidepressant medication, chronic conditions that could interfere with anxiety assessment, wounds or infection at the acupressure points, and concurrent complementary therapy.

The intervention consisted of acupressure at HT-7 (Shenmen) and GV-20 (Baihui). Respondents received instruction and demonstration regarding the procedure and subsequently performed the intervention independently at home once daily at night for seven consecutive days. Acupressure was applied using the thumb with the pressure intensity specified in the study protocol, followed by 40 counterclockwise rotations at each acupressure point. Respondents documented the implementation through photographs or videos, which were used to monitor adherence to the intervention protocol.

Anxiety levels were assessed before and after the seven-day intervention using the Hamilton Anxiety Rating Scale (HAM-A). The HAM-A consists of 14 items, with each item scored from 0 to 4, resulting in a total score ranging from 0 to 56. Anxiety severity was categorized according to the scoring criteria used in the study protocol. The primary outcome was the

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change in HAM-A score between the pretest and posttest assessments.

Data were analyzed using univariate analysis to describe the characteristics and anxiety levels of the respondents. The Shapiro-Wilk test was used to assess data normality. Because the data were not normally distributed, the Wilcoxon Signed Rank Test was used to compare anxiety levels before and after

the intervention. Statistical significance was set at $p < 0.05$.

The study was conducted according to ethical principles, including informed consent, anonymity, confidentiality, voluntary participation, and justice. Respondents were informed about the study procedures, potential benefits, and their right to participate voluntarily.

RESEARCH RESULTS

Table Distribution of Anxiety Levels Before and After Acupressure Intervention (N=21)

Variable	Results	p-value
Anxiety Before Intervensi (n/%)		<0.001
Mild anxiety	9/43.0	
Mild-to-moderate anxiety	12/57.0	
Anxiety After Intervensi (n/%)		<0.001
Mild anxiety	9/43.0	
Mild-to-moderate anxiety	12/57.0	

The table shows that before acupressure, the majority of respondents experienced mild-to-moderate anxiety, with 12 respondents (57.1%), while 9 respondents (42.9%) experienced mild anxiety. Indicates that after seven days of acupressure, most respondents were categorized as having mild anxiety,

17 respondents (81.0%), while 4 respondents (19.0%) were no longer categorized as anxious. The Wilcoxon Signed Rank Test produced $p < 0.001$, which is lower than 0.05. This indicates a statistically significant difference in anxiety levels before and after the acupressure intervention.

DISCUSSION

The study found that before intervention, the majority of menopausal women had mild-to-moderate anxiety (57.1%). Menopause involves declining ovarian function and reduced estrogen and progesterone, which may affect emotional regulation. Changes related to estrogen may influence neurotransmitters involved in mood regulation, making some women more vulnerable to anxiety and emotional changes (Cho et al., 2025; Hickey et al., 2024).

Anxiety is also influenced by psychosocial factors. Knowledge about menopause, family support, coping ability, social conditions, and individual psychological responses may affect how women adapt to menopausal changes. Previous research has reported an association between knowledge and anxiety among women experiencing menopause (Lestari & Bahrum, 2024; Panjaitan & Haro, 2024).

After seven days of intervention, the distribution shifted from mild-to-moderate anxiety toward mild anxiety and no anxiety. The absence of respondents in the mild-to-moderate category and the increase in the not-anxious category indicate an improvement in anxiety status after the intervention.

Acupressure provides mechanical stimulation to specific body points and may promote relaxation through nervous-system responses. Stimulation of HT-7 and GV-20 has been associated with modulation of autonomic activity and neurophysiological responses related to emotional regulation. Evidence from previous research supports the use of these points as a complementary approach for anxiety reduction (Devi et al., 2025; Chen et al., 2025).

The present findings are consistent with another report who reported that self-administered acupressure could reduce anxiety and menopausal

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complaints (Mulyandari & Trisnawati, 2024). They are also consistent with another report who reported reduced HAM-A scores following stimulation of HT-7 and GV-20. These similarities strengthen the potential role of acupressure as a practical complementary intervention for menopausal anxiety (Devi et al., 2025).

Also for companioning sleep problems acupressure interventions could be an important resource. The effect size for depression and anxiety was substantial (0.86, $p < 0.001$) as well as a strong effect for sleep problems (1.71, $p < 0.001$), indicating a therapeutic potential for acupressure in addressing these co-occurring conditions. Main acupoints for mental health conditions are HT7, PC6 and GV20 with potential further diversification on the basis of the needs and preferences of the older adult. Meta-regression shows that a more frequent applications yield a stronger effect (Vermeulen et al., 2025).

The statistically significant Wilcoxon result ($p < 0.001$) supports the observed change in anxiety category. Nevertheless, because this study used a one-group pretest-posttest design without a control group, changes cannot be attributed exclusively to acupressure. Natural adaptation, family support, expectancy, and the passage of time may also contribute to changes in anxiety.

Some respondents remained in the mild-anxiety category despite experiencing lower anxiety scores. This may reflect differences in psychological condition, stress-management ability, knowledge of menopause, social support, age, socioeconomic circumstances, and individual adaptation. Thus, the response to acupressure may vary between individuals depending on internal and external factors.

CONCLUSION

Acupressure at HT-7 and GV-20 points significantly reduced anxiety levels among menopausal women at the Elderly Posyandu of Penggung Village. Before intervention, 12 respondents (57.1%) experienced mild-to-moderate anxiety, whereas after seven days of intervention, 17 respondents (81.0%) experienced mild anxiety and 4 respondents (19.0%) were categorized as not anxious. The Wilcoxon Signed Rank Test showed $p < 0.001$, indicating a significant difference before and after the intervention.

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SUGGESTION

Acupressure at HT-7 and GV-20 may be considered as a simple complementary intervention in elderly health services to support the management of mild-to-moderate anxiety among menopausal women. Further studies should involve larger samples, a control group, and longer follow-up to assess the sustainability of the intervention effect.

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