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## **The Effect Of Therapeutic Touch And Music Listening On Sleep Quality, Menopausal Symptoms And Quality Of Life In Menopausal Women**

### **Abstract**

Menopause is a natural phenomenon and physiological process in middle-aged women. It is noted that women most often complain of vasomotor symptoms and sleep disorders during the menopausal period, and therefore their quality of daily life is negatively affected. Reduce symptoms and improve quality of life for menopausal women they are applying for medical approaches due to the side effects of the method compared to music, yoga, aromaterapi, terapotik massage, physical exercise, sleep hygiene education, therapeutic touch, acupressure, acupuncture and cognitive behavioral therapy as a non pharmacological methods, it is observed that they resort to such methods. Therefore, the aim of this study is to investigate the effect of therapeutic touch and music listening on sleep quality, menopausal symptoms and quality of life in menopausal women. Therefore, the aim of this study is to investigate the effect of therapeutic touch and music listening on sleep quality, menopausal symptoms and quality of life in menopausal women.

### **Introduction**

Menopause is a long period of life characterized by the permanent termination of the menstrual cycle due to the cessation of ovarian functions. It is the most important midlife crisis in which special physical and psychological differences occur, often associated with a decrease in estrogen levels [1], [2]. Although the natural age of menopause varies, it usually ranges from 40 to 58 years, and the average age of menopause is accepted as 51 [2], [3]. When the average life expectancy of women is accepted as 80 years, women spend about a third or more of their life in the postmenopausal period. [4]–[7].

Along with the decrease in estrogen during menopause, symptoms related to hot flashes, night sweats, palpitations, irritability and sleep disorders are common. Especially sleep disorders are higher than in the pre-menopausal period. It has been reported that approximately 40-60% of menopausal women have sleep-related symptoms with night awakenings as the most common complaint [7]–[9]. In the study of Lima et al. in which they included 819 climacteric

women in Brazil; Deterioration in sleep quality was detected in 67% of the sample, more prominently in postmenopausal women [11]. The most common complaints during menopause are deterioration of sleep quality and chronic insomnia [4], [12]. Untreated sleep disorders and menopausal symptoms adversely affect health and especially reduce quality of life. When the literature is examined, poor sleep quality and insufficient sleep duration; hormonal changes, poor physical health, obesity, cardiovascular disease, diabetes, irritability, physical and mental burnout, and poor quality of life, such as short-term and long-term outcomes. It is stated that the symptoms seen in the menopausal period negatively affect the quality of life of women. [5], [6], [12]–[14].

Although the effective treatment to be used to solve the sleep problems experienced during the menopause period, reduce the menopausal symptoms and improve the quality of life is medication or hormonal therapy, the use of non-pharmacological methods is increasing due to the potential side effects of these treatments and the harm outweighing the benefit [4], [15]. Some of these methods are music, yoga, aromatherapy, therapeutic massage, physical exercise, sleep hygiene education, therapeutic touch, acupressure, acupuncture and cognitive behavioral therapy methods [1], [9], [16]–[20].

Therapeutic touch, which is among the non-pharmacological methods that have started to be preferred in recent years, is the interpretation of an ancient healing experience in the modern age. It is a non-invasive nursing intervention that channels energy using the hands. There are no known side effects associated with the use of therapeutic touch. Therapeutic touch is beneficial in reducing anxiety, pain and depression, and increasing relaxation and well-being [21]. Therefore, this calming effect of therapeutic touch also facilitates falling asleep and can improve quality of life by easing menopausal symptoms [20].

Another widely used non-pharmacological method is recital [25]. Perceived calming music lowers catecholamine levels, respiratory rate, heart rate, and blood pressure. Therefore, by providing physiological and psychological relaxation, music helps individuals to sleep better, reduce menopausal symptoms, and improve quality of life [27], [28]. In a metallysis study, it was determined that listening to calming music effectively improved sleep quality [29].

When the literature was examined, no study was found that examined the effects of therapeutic touch and music listening on sleep quality, menopausal symptoms and menopausal quality of life in menopausal women. It is thought that the findings obtained from the research will contribute to the literature. Based on all these, the aim of this study is to examine the effects of therapeutic touch and music listening on sleep quality, menopausal symptoms and quality of life in menopausal women.

## **Aim**

The research was conducted to examine the effects of therapeutic touch and music listening on sleep quality, menopausal symptoms and quality of life in menopausal women.

## **Research Hypotheses**

H10: Therapeutic touch does not affect sleep quality in menopausal women

H11: Therapeutic touch affects sleep quality in menopausal women

H20: Therapeutic touch does not affect menopausal symptoms in menopausal women

H21: Therapeutic touch affects menopausal symptoms in menopausal women

H30: Therapeutic touch does not affect quality of life in menopausal women

H31: Therapeutic touch affects quality of life in menopausal women

H40: Music listening does not affect sleep quality in menopausal women

H41: Listening to music affects sleep quality in menopausal women

H50: Listening to music does not affect menopausal symptoms in menopausal women

H51: Listening to music affects menopausal symptoms in menopausal women

H60: Music listening does not affect quality of life in menopausal women

H61: Music listening affects quality of life in menopausal women

## **3. MATERIALS AND METHOD**

### **3. 1. Type of Research**

The research was planned to be carried out as an experimental model with a pre-test post-test control group.

### **3. 2. Place and Time of Research**

The research will be carried out with menopausal women between the ages of 45-59 working at İnönü University in Malatya between August 2021 and July 2022.

### **3.3. Population and Sample of the Research**

The population of the research will consist of 322 women between the ages of 45-59 working at İnönü University at the time of the research. The sample will be menopausal women aged between 45-59 working at İnönü University. The number of samples in the study was calculated using the G\*Power 3.1.9.4 program. Considering the 3-group (Experiment 1, Experiment 2, Control) and 2-measurement (Pretest, Posttest) research design in the calculation, medium effect size ( $d = 0.25$ ), 5% margin of error ( $\alpha = 0.05$ ) and % for ANOVA

test in Repeated Measures. When a power of 80 ( $1-\beta = 0.80$ ) was taken, the sample size was found to be 36 for each group, 108 in total).

**Inclusion Criteria for Research;**

- Between the ages of 45-59
- Not taking Hormone Replacement Therapy,
- No psychiatric history,
- Women who do not use any other CAM methods will be included in the study.

**Exclusion Criteria from Research;**

- Those who are in surgical menopause,
- Having auditory problems that prevent listening to music,
- Using any other TAT method,
- Women who use drugs that affect sleep (using antidepressant, antihistamine, benzodiazepan, hypnotic and narcotic drugs) will be excluded from the study.

**3.4. Randomization of Groups**

All women between the ages of 45-59 will be interviewed in the study. Menopausal women will be included in the study. Menopausal women who are eligible and agree to participate in the study will be listed. Then, using the Random Integer Generator method from the Numbers subheading from Random.org site, 1-108 single-group columns will be created. Women will be randomly assigned to numbers 1, 2, 3 based on list numbers. (At the beginning of the research, lots will be drawn to determine which number belongs to the experimental or control groups.

**4. Data Collection Tools**

Participant Identification Form,, Pittsburgh Sleep Quality Index (PUKI), Menopausal Symptoms Rating Scale (MDS), and Menopause-Specific Quality of Life Scale (MENQOL) will be used to collect data.

**4.1. Participant Identification Form**

Participant introduction form developed by the researcher using the literature; women's socio-demographic characteristics (age, education level, occupation, economic status, marital status, family type, body mass index, number of children, chronic disease status, smoking and alcohol use status) and menopausal information (whether or not I can be in menopause, Menstrual pattern and menopause period) were created.

**4.2. Pittsburgh Sleep Quality Index**

Developed by Buysse et al., it is a self-reported screening and evaluation test that provides detailed information about sleep quality and the severity and type of sleep disorder in the last month. The index consists of a total of 24 questions and 7 components. The sum of the scores from the seven components gives the total PUKI score. The total PUKI score can take a value between 0-21. The sleep quality of individuals with a total PUKI score of 5 or less was “good”; The sleep quality of individuals with a score above 5 points is evaluated as “poor”. Ağargün et al. conducted a Turkish validity and reliability study of the index and determined the Cronbach alpha internal consistency coefficient as 0.80.

### **4.3. Menopause Rating Scale**

The scale was first developed in German by Schneider, Heinemann et al. in 1992 to measure the severity of menopausal symptoms and their effect on quality of life. The Turkish validity and reliability study of the scale was carried out by Gürkan in 2005. There are a total of 11 questions on the Likert-type scale, including menopausal complaints. Each question is scored from 0 to 4. The sum of the scores obtained from each item gives the total score of the scale. While the minimum score that can be taken from the scale is 0, the maximum score is 44. The scale consists of 3 sub-dimensions. The increase in the total score obtained from the scale shows the increase in the severity of the complaints, while at the same time it shows that the quality of life is negatively affected. The Cronbach alpha coefficient of the scale was found to be 0.84.

### **4.4. Menopause Symptoms Rating Scale (MENQOL)**

The scale was developed by John R. Hilditch et al. in 1996 to develop a health-specific quality of life scale in menopause. The validity and reliability of the scale was determined by Kharbouch and Şahin in 2007 by adapting the scale to Turkish society. MENQOL is a 29-item Likert-type scale. Each question score is ranked from 0 to 6. A score of 0 indicates that women do not have any problems with that subject. A score of 1 indicates that there is a problem with that subject, it is experienced, but it is not disturbing at all. Scores between 2 and 6 indicate the severity and increasing degrees of the existing problem. An increase in the scale score indicates an increase in the severity of the complaints. The Cronbach's alpha coefficient of the scale was found to be 0.82 for the vasomotor domain, 0.81 for the psychosocial domain, 0.87 for the physical domain, and 0.89 for the sexual domain.

## **5. Data Collection**

The data of the research will be collected by the researcher using face-to-face interview technique in the units where the people work between August 2021 and July 2022, from women

who meet the conditions and volunteer to participate in the research.

### **Therapeutic Touch Group**

- Each of the women will be informed about the purpose and content of the study at the first meeting, and informed consent will be obtained from the women who meet the conditions for participation and agree to participate. The pre-test data in the research will be obtained with the Participant Identification Form, PSQI, MRS and MENQOL.
- After pre-test data collection, women will be given an appointment for therapeutic administration.
- The therapeutic touch group will be applied to the therapeutic touch group once a week for four weeks in a suitable room in the Faculty of Nursing and on the specified day and time by the researcher.
- At the end of the fourth week, post-test data will be obtained by filling in PSQI, MRS and MENQOL again.

### **Music Listening Group;**

- Each of the women was informed about the purpose and content of the study at the first meeting, and informed consent was obtained from the women who met the conditions for participation and accepted to participate.
- The pre-test data in the research will be obtained with the Participant Identification Form, PSQI, MRS and MENQOL
- Music stream, music will be uploaded to mobile phones. He will be asked to listen to music (relaxation music in the relaxation exercises CD prepared by the Turkish Psychological Association) for 30 minutes before going to sleep every day for four weeks.
- At the end of the fourth week, post-test data will be obtained by filling in PSQI, MRS and MENQOL again.

### **Control Group;**

- • Each of the women will be informed about the purpose and content of the study at the first meeting, and informed consent will be obtained from the women who meet the conditions for participation and agree to participate.
- • The pre-test data in the research will be obtained with the Participant Identification Form, PSQI, MRS and MENQOL

- No action will be taken on the control group for four weeks. At the end of the fourth week, post-test data will be obtained by filling in PSQI, MRS and MENQOL again.

## **6. Application of Research**

### **6.1. Nursing Initiative Experimental Groups;**

**Therapeutic Touch Group:** At New York University, Dr. It was developed by Dolores Krieger and Dora Kunz in the 1970s (Meehan, 1998). In order to perform the therapeutic touch application, the researcher attended the training prepared by the International Association of Therapeutic Touch and received a certificate (Appendix -). In order to examine the effects of therapeutic touch on menopausal symptoms, sleep and quality of life, women will be given therapeutic touch, lasting for 15 minutes, once a week for four weeks (Macrae, 2000). In the therapeutic touch application;

- a) The transaction will be explained to the woman,
- b) The woman will be seated on the chair,
- c) The Practitioner will center by keeping his body, mind, and emotions quiet, focused, prepare himself for practice, and remain centered throughout the enterprise.
- d) Goodwill will be made to help the woman get treatment,
- e) In order to scan the energy field, the whole body of the patient will be held with the palms of the practitioner's hands facing the patient and will be moved with a soft movement from 8-12 cm from head to toe, the state of the energy field will be evaluated by noticing the differences in the sensory cues on the palm surfaces of the hands.
- f) Sweeping movements will be done calmly, gently and rhythmically to clear and correct imbalances in the energy field.
- g) Energy will be modulated to restore flow
- h) The energy field will be re-evaluated, if there is an imbalance, the stages will be repeated.
- i) The woman will be grounded, the treatment will be terminated,
- j) The woman will be listened to and feedback will be received

**Music Listening Group:** After the pre-test data, the women were asked to listen to the relaxation music included in the relaxation exercises CD prepared by the Turkish Psychological Association every day for four weeks in a comfortable environment at home for 30 minutes before bedtime. The average sleep time of women will be learned and cell phone alarms will

be set to ring one hour before bedtime every day for four weeks to remind women to listen to music before bedtime.

### **Variables of the Study**

**Dependent Variable:** The mean scores obtained from the PSQI, MSDS, and MÖYQÖ scales constitute the dependent variables of the study.

**Independent Variable:** Therapeutic Touch and Music Concert practices constitute the independent variable of the research.

**Control Variables:** Women's socio-demographic characteristics (age, education level, occupation, economic status, marital status, family type, body mass index, number of children, chronic disease status, smoking and alcohol use) and menopausal information (menopausal or not). absence, menstrual cycle and menopause duration) constituted the control variables of the study.

### **Statistical Analysis of Research Data**

IBM SPSS Statistics 22.0 package for evaluation of research data program was used. In the evaluation of the data, percentage, mean, standard deviation, normal distribution, t-test in independent groups, t-test in dependent groups and ANOVA tests, multiplex linear regression and correlation analyzes were used. Statistical significance level  $p < 0.05$  has been accepted as.

### **Ethical Principles of Research**

In order to carry out the research; Ethics committee approval (2021/2299) was obtained from the Inonu University Health Sciences Non-Interventional Clinical Researches and Publication Ethics Committee (Annex-) and the necessary permissions were obtained from the Inonu University Personnel Department (Annex-) where the research was conducted. The women participating in the study were included in the study after an explanation was given about the study before the study and an "Informed Consent Form" was received verbally and in writing.



## REFERENCES

- [1] Z. Abedian, L. Eskandari, H. Abdi, and S. Ebrahimzadeh, "The effect of acupressure on sleep quality in menopausal women: A randomized control trial," *Iran. J. Med. Sci.*, vol. 40, no. 4, pp. 328–334, 2015.
- [2] K. L. Marlatt, R. A. Beyl, and L. M. Redman, "A qualitative assessment of health behaviors and experiences during menopause: A cross-sectional, observational study," *Maturitas*, vol. 116, no. March, pp. 36–42, 2018, doi: 10.1016/j.maturitas.2018.07.014.
- [3] "AGOG," 2021. <https://www.acog.org/womens-health/faqs/the-menopause-years>.
- [4] M. Kamalifard, A. Farshbaf-Khalili, M. Namadian, Y. Ranjbar, and S. Herizchi, "Comparison of the effect of lavender and bitter orange on sleep quality in postmenopausal women: A triple-blind, randomized, controlled clinical trial," *Women Heal.*, vol. 58, no. 8, pp. 851–865, 2018, doi: 10.1080/03630242.2017.1353575.
- [5] P. A. Naghan *et al.*, "Sleep disorders and mental health in menopausal women in Tehran," *Tanaffos*, vol. 19, no. 1, pp. 31–37, 2020.
- [6] Q. Xu and C. P. Lang, "Examining the relationship between subjective sleep disturbance and menopause: a systematic review and meta-analysis," *Menopause*, vol. 21, no. 12, pp. 1301–1318, 2014, doi: 10.1097/gme.0000000000000240.
- [7] A. Moudi, A. Dashtgard, H. Salehiniya, M. Sadat Katebi, M. Reza Razmara, and M. Reza Jani, "The relationship between health-promoting lifestyle and sleep quality in postmenopausal women," *Biomed.*, vol. 8, no. 2, pp. 34–40, 2018, doi: 10.1051/bmdcn/2018080211.
- [8] D. Cintron *et al.*, "Efficacy of menopausal hormone therapy on sleep quality: systematic review and meta-analysis," *Endocrine*, vol. 55, no. 3, pp. 702–711, 2017, doi: 10.1007/s12020-016-1072-9.
- [9] Y. Cao *et al.*, "Effect of acupuncture on insomnia following stroke: study protocol for a randomized controlled trial.," *Trials*, vol. 17, no. 1, p. 546, 2016, [Online]. Available: <http://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=119628073&site=ehost-live%0Ahttp://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=prem&NEWS=N&AN=27852282%0Ahttp://www.trialsjournal.com/home/%0Ahttp://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=r>.
- [10] A. M. Lima *et al.*, "Loss of quality of sleep and associated factors among menopausal women," *Cienc. e Saude Coletiva*, vol. 24, no. 7, pp. 2667–2678, 2019, doi: 10.1590/1413-81232018247.19522017.
- [11] H. Attarian, H. Hachul, T. Guttuso, and B. Phillips, "Treatment of chronic insomnia disorder in menopause: Evaluation of literature," *Menopause*, vol. 22, no. 6, pp. 674–684, 2015, doi: 10.1097/GME.0000000000000348.
- [12] A. Crivello, P. Barsocchi, M. Girolami, and F. Palumbo, "The Meaning of Sleep Quality: A Survey of Available Technologies," *IEEE Access*, vol. 7, pp. 167374–167390, 2019, doi: 10.1109/ACCESS.2019.2953835.
- [13] O. Troynikov, C. G. Watson, and N. Nawaz, "Sleep environments and sleep physiology: A review," *J. Therm. Biol.*, vol. 78, no. October, pp. 192–203, 2018, doi: 10.1016/j.jtherbio.2018.09.012.
- [14] H. Hachul and D. N. Polesel, "Insomnia Pharmacotherapy: a Review of Current Treatment Options for Insomnia in Menopause," *Curr. Sleep Med. Reports*, vol. 3, no. 4, pp. 299–305, 2017, doi: 10.1007/s40675-017-0090-3.
- [15] R. F. Afonso *et al.*, "Yoga decreases insomnia in postmenopausal women: A randomized clinical trial," *Menopause*, vol. 19, no. 2, pp. 186–193, 2012, doi: 10.1097/gme.0b013e318228225f.
- [16] A. Johnson, L. Roberts, and G. Elkins, "Complementary and Alternative Medicine for

- Menopause,” *J. Evidence-Based Integr. Med.*, vol. 24, pp. 1–14, 2019, doi: 10.1177/2515690X19829380.
- [17] H. Özcan, S. Çakmak, and E. Salman, “Complementary and Alternative Medicine Methods Used for Sleep Disturbance in Menopause,” *J. Turkish Sleep Med.*, vol. 7, no. 3, pp. 207–213, 2020, doi: 10.4274/jtsm.galenos.2020.84803.
- [18] O. Vardar, S. Özkan, and P. Sercekus, “Postmenopozal kadınlarda uygulanan egzersiz programının uyku kalitesine etkisi,” *Cukurova Med. J.*, vol. 45, no. 3, pp. 1108–1114, 2020, doi: 10.17826/cumj.701697.
- [19] J. V. Dall, “Promoting sleep with therapeutic touch,” *Addict. Nurs. Netw.*, vol. 5, no. 1, pp. 23–24, 1993.
- [20] A. Tabatabaee, M. Z. Tafreshi, M. Rassouli, S. A. Aledavood, H. AlaviMajd, and S. K. Farahmand, “Effect of Therapeutic Touch in Patients with Cancer: a Literature Review,” *Med. Arch. (Sarajevo, Bosnia Herzegovina)*, vol. 70, no. 2, pp. 142–147, 2016, doi: 10.5455/medarh.2016.70.142-147.
- [21] M. J. Cordi, S. Ackermann, and B. Rasch, “Effects of Relaxing Music on Healthy Sleep,” *Sci. Rep.*, vol. 9, no. 1, pp. 1–9, 2019, doi: 10.1038/s41598-019-45608-y.
- [22] Y. H. Liu, C. C. S. Lee, C. H. Yu, and C. H. Chen, “Effects of music listening on stress, anxiety, and sleep quality for sleep-disturbed pregnant women,” *Women Heal.*, vol. 56, no. 3, pp. 296–311, 2016, doi: 10.1080/03630242.2015.1088116.
- [23] G. T. Dickson and E. Schubert, “How does music aid sleep? literature review,” *Sleep Med.*, vol. 63, pp. 142–150, 2019, doi: 10.1016/j.sleep.2019.05.016.
- [24] C.-T. Chen *et al.*, “Effect of music therapy on improving sleep quality in older adults: A systematic review and meta-analysis,” 2021, doi: 10.1111/jgs.17149.
- [25] J. Cohen, *Statistical Power Analysis for the Behavioral Sciences.*, 2nd ed. 1988.
- [26] D. J. Buysse, C. F. Reynolds III, T. H. Monk, S. R. Berman, and D. J. Kupfer, “The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research,” *Psychiatry Res.*, vol. 28, no. 2, pp. 93–213, 1989.
- [27] M. Ağargün, H. Kara, and Ö. Anlar, “Pitsburg Uyku Kalitesi İndeksinin Geçerliliği ve Güvenirliği,” *Türk Psikiyatr. Derg.*, vol. 7, no. 2, 1996.
- [28] Ö. C. Gürkan, “Menopoz semptomları değerlendirme ölçeğinin Türkçe formunun güvenilirlik ve geçerliliği,” *Hemşirelik Forumu Derg.*, vol. 3, pp. 30–35, 2005.
- [29] J. R. Hilditch *et al.*, “A menopause-specific quality of life questionnaire: Development and psychometric properties,” *Maturitas*, vol. 24, no. 3, pp. 161–175, 1996, doi: 10.1016/S0378-5122(96)82006-8.
- [30] N. H. ŞAHİN, N. H., Kharbouch, S. B., & Şahin, “Menopozal dönemlerdeki yaşam kalitesinin belirlenmesi,” *Florence Nightingale Hemşirelik Dergisi*, vol. 15, no. 59, pp. 82–90, 2007.
- [31] C. T. Meehan, “Therapeutic touch as a nursing intervention,” *J. Adv. Nurs.*, vol. 28, no. 1, pp. 117–125, 1998, doi: 10.1097/00004650-198711000-00004.
- [32] J. Macrae, *Therapeutic Touch*. izmir: Ege Meta Yayınları, 2000.

