



Massage Therapy to Relieve Menopausal Symptoms: A Systematic Review

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Abstract

Objective: This study aims to analyze the duration, time, and results of massage therapy in reducing symptoms of menopause. Methods: A systematic review through maternity nursing articles to analyze the effects of massage therapy in reducing menopausal symptoms. The inclusion criteria in this study are 1) related articles about massage therapy. 2) Articles that contain interventions used in reducing menopausal symptoms. 3) Articles use English in writing. 4) Articles published after 2010. 5) Articles published have a complete section. Search articles using electronic databases namely Sciene Direct, Pubmed, PMC, Google Scholar and Scopus. Articles that meet the inclusion criteria will be collected and analyzed systematically. Results: In a systematic review it is explained that massage therapy can reduce menopausal symptoms but in the location and duration of the intervention still need consideration from further researchers. Conclusion: Based on the results of the study, massage therapy carried out in the back area is recommended to reduce menopausal symptoms.

Keywords: *massage therapy, menopause, menopausal symptoms, women*

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Introduction

Menopause is a condition in which ovarian activity decreases (reduced estrogenic activity), leading to different signs & symptoms. Often, the first sign is menstrual irregularity. Vasomotor symptoms include hot flushes, palpitations, fatigue and weakness (Cook, 2016). Symptoms occur at night, disrupting sleep patterns leading to insomnia. Other

important physical changes are vaginal dryness, headache, irritability, mood swings & nervousness, difficulty concentrating, depression. (O'malley, 2016).

Management in reducing menopausal symptoms can use pharmacological management such as estrogen hormone replacement therapy, gabapentin, antidepressants, clonidine, but it can cause dependence and constipation

effects (Ruffin, 2011). Another treatment that is an option is non-pharmacological management, which is easy, without drugs, non-invasive, does not require a lot of money and can choose and make their own decisions for the therapy used (Senol, 2017). Treatments that can be used to manage symptoms of the menopausal transition period are massage therapy (Pacholyk, 2015).

Research from (Allah, 2018), postmenopausal women in the massage therapy group which were carried out in the back area twice for 30 minutes a week and were performed experienced a significant increase in overcoming menopausal symptoms such as a decrease in the frequency of hot flushes and night sweats, a decrease in urinary symptoms. and dysparonia. A very significant improvement was observed in psychological symptoms. In line with the research above, research by (Fatemeeh, 2012) in Tehran, Iran showed that massage therapy intervention on the back for two times 30 minutes in one week and carried out for four weeks can reduce menopausal symptoms. Many previous studies have discussed massage that is useful for reducing complaints of

menopausal symptoms. However, previous studies have presented different results regarding massage duration, so this systematic review aims to identify non-pharmacological massage nursing interventions that have an impact on reducing menopausal symptoms by looking at these three aspects, namely: massage duration, massage time and changes in menopausal symptoms.

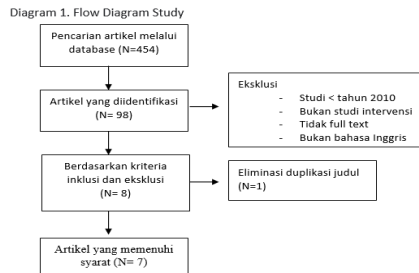
Method

Search Strategy

A systematic review through nursing articles related to massage to reduce menopausal symptoms. Articles are obtained from retrieval via the internet which is connected to a database. Electronic databases used are Sciene Direct, Pubmed, PMC, Google Scholar and Scopus. Search articles using the keywords “massage therapy”, “menopause”, “menopausal symptoms”, and “women”. Article limitation is done by using articles published after 2010.

This systematic protocol uses the PICO keyword to increase the accuracy and completeness of reporting intervention studies. The PICO keywords used were: P

(menopause women), I (massage therapy), C (pre post massage therapy), and O (menopausal symptoms).



Inclusion Criteria and Exclusion Criteria

The inclusion criteria of the articles used are: 1) articles related to massage therapy. 2) Articles containing interventions used in reducing menopausal symptoms. 3) Articles use English in writing. 4) Articles published after 2010. 5) Articles published have complete parts.

Article exclusion criteria used are:

- 1) Articles published less than 2010.
- 2) Use of non-English language.
- 3) The published article is not complete.

Search Flow

The search was conducted using the Sciene Direct, Pubmed, PMC, Scopus and Proquest databases using the keywords: “massage therapy”, “menopause”,

“menopausal symptoms”, and “women”. The articles that appear are then sorted so that no articles with the same title are found. Furthermore, the articles were sorted based on the inclusion and exclusion criteria. Articles that only display abstracts will be eliminated, so that articles will be analyzed.

Article Extraction

The articles obtained were then extracted. Extraction of articles based on the author of the article, the year of publication of the article, the number of samples used, the duration of massage, the time taken when massaging, the results of the research carried out, and the article database.

Synthesis of Results

Data synthesis was carried out qualitatively by the author and two co-authors by discussing to analyze the selected studies. All interventions aimed at assessing the reduction of menopausal symptoms. The synthesis of the results is shown in Table 1.

Table 1. Syntetic Grid

No	Author/Year	Title	Aims	Methods	Results
1	Yang Kyung-Hee et al, 2015 (Jeong-Ran, 2015)	The Effects of Meridian Massage on Menopausal Symptoms and Shin-Hur in Middle-aged Menopausal Women	Untuk mengidentifikasi efek pijat meridian pada gejala menopause dan Hur pada wanita menopause	Quasi experimental pre test post test control design/ 18 control and 18 Pemberian pijat meridian dilakukan selama tiga kali seminggu dengan waktu masing-masing 20 menit dan dilakukan selama empat minggu	Eksperimental kelompok menunjukkan penurunan signifikan gejala menopause (U = 77,00, p = 0,020) dan Shin-Hur (U = 76,00, p = 0,017). Ada korelasi positif yang signifikan antara gejala menopause dan Shin-Hur (r = 0,497, p = 0,003).
2	D. S. Oliveira et al, 2018	Effect of therapeutic massage climacteric symptoms in postmenopausal women	Untuk mengetahui efek terapi pijat pada gejala klimakterik perempuan menopause	Quasi experimental/ 15 group control dan 15 group intervensi Pemberian pijat terapietik dilakukan selama dua kali seminggu dengan waktu masing-masing 60 menit dan dilakukan selama delapan minggu	Pijat terapietik pada perempuan menopause memiliki efek yang signifikan pada penurunan gejala menopause khususnya pada insomnia, yang diukur dengan ISI (Insomnia Severity Index) P=0,000
3	Darsareh et al, 2012	Effect of aromatherapy massage on menopausal symptoms	Mengetahui efek dari pijat aromaterapi pada gejala menopause	Quasi experimental 30 group control dan 30 group intervensi Pemberian pijat punggung dengan minyak	Pijat aromaterapi efektif dalam mengurangi gejala menopause, yang diukur dengan MRS (menopause rating scale)

No	Author/Year	Title	Aims	Methods	Results
				aromaterapi (lavender, rose geranium, rosemary) dilakukan selama dua kali seminggu dengan waktu masing-masing 30 menit dan dilakukan selama empat minggu	P<0,000
4	Inas, 2018	Massage Therapy for Alleviating Menopausal Transitional Period Symptoms among Women employed at Suez Canal University Hospital	Mengetahui efek dari terapi pijat untuk mengurangi gejala periode transisi menopause di kalangan wanita Suez Canal University	Quasi eksperimental 37 group control dan 37 group intervensi Pemberian pijat punggung dilakukan selama dua kali seminggu dengan waktu masing-masing 30 menit dan dilakukan selama delapan minggu (total 16 sesi pijat) Evaluasi dilakukan setelah sesi ke 8 dan 16.	Wanita dalam kelompok terapi pijat mengalami peningkatan yang signifikan dalam banyak gejala periode transisi menopause seperti penurunan frekuensi serangan <i>hot flushes</i> dan keringat malam, penurunan pada semua gejala kemih dan <i>disparunia</i> . Peningkatan yang sangat signifikan diamati pada gejala psikologis.
5	Seyed et al, 2014	Comparison of the Efficacy of Massage and Aromatherapy Massage With Geranium on Depression in Postmenopausal Women	Untuk mengetahui efek pijat aromaterapi geranium pada depresi perempuan menopause	Clinical trial/ 40 kelompok pijat aromaterapi, 40 kelompok kontrol, 40 kelompok pijat. Pemberian pijat	Pijat aromaterapi mengurangi skor depresi rata-rata (MD: 0,51, 95% CI). Terapi pijat juga mengurangi skor depresi (MD: 0,20, 95% CI) (P <0,001). Untuk

No	Author/Year	Title	Aims	Methods	Results
				punggung yang diberika aromaterapi geranium 2% dilakukan selama satu kali seminggu dengan waktu 30 menit dan dilakukan selama delapan minggu	mendeteksi efek aromaterapi dan terapi pijat secara terpisah, skor depresi rata-rata dibandingkan dan pijat aromaterapi mengurangi skor depresi lebih dari terapi pijat (MD: -0,31, 95% CI).
6	Taavoni et al, 2013	A Randomized Control Trial To Determine The Effect Of Massage Therapy On Menopausal Symptoms	Mengetahui efektifitas terapi pijat pada gejala menopause	Randomized control trial/ 30 experimental group and 30 control group Pemberian pijatan dilakukan dengan menggunakan minyak murni selama dua kali seminggu dengan waktu 30 menit dalam empat minggu.	Terapi pijat efektif dalam mengurangi gejala psikologis dan somatik selama menopause. Tapi, tidak berpengaruh pada gejala urogenital. P<0,001
7	Jan Williamson et al, 2012	Randomised controlled trial of foot massage for menopausal symptoms	Mengetahui efektifitas pijat refleksi pada gejala psikologis ibu menopause	Randomized control trial/ 38 experimental group and 38 control group Pemberian pijatan pada kaki dilakukan dua kali sehari dengan waktu 45 menit dalam 12 minggu.	Pijat kaki kurang efektif untuk mengatasi gejala psikologis yang terjadi selama menopause.

Result

Search result

Diagram one shows a systematic search flowchart. The search found 454 articles from the database which were identified as 98 articles and which met the inclusion and exclusion criteria as many as 8 articles, then there were duplicate titles so that seven articles were obtained that were suitable for systematic reviews.

Synthesized Study Characteristics

An overview of seven articles summarized in the characteristics associated with massage therapy interventions with the aim of assessing the reduction of menopausal symptoms. The synthesis of the results from seven articles describes the intervention given, the timing, and the results obtained. The synthesis of these results consisted of four quasi-experiments: (Yang Kyung Hee et al, 2015), (D.S Oliveira et al, 2018), (Darsereh et al, 2012), (Inas Abd Allah, 2018). One clinical trial: (Seyed et al, 2014). Two randomized control trials (Taavoni, 2013), (Jan Williamson et al, 2012)

1. Duration of massage therapy intervention

Massage therapy interventions from the seven articles reviewed explained different things regarding the duration of giving massage therapy. Research by Yang Kyung Hee et al (2015) conducted massage therapy for 20 minutes. D.S Oliveira et al (2018) explained that therapeutic massage was carried out for 60 minutes. Subsequent research by Darsereh et al (2012) Giving back massage with aromatherapy oil (lavender, rose geranium, rosemary) was carried out for 30 minutes. Research by Inas Abd Allah (2018) Giving back massage is done for 30 minutes. Research by Seyed et al (2014) Giving back massage given 2% geranium aromatherapy was carried out for 30 minutes. Meanwhile, Taavoni, (2013) did massage with pure oil for 30 minutes. And Jan Williamson et al (2012) performed a massage on the feet for 45 minutes.

2. Massage therapy massage time
The massage times of the seven articles that have been obtained have different massage times.

Research by Yang Kyung Hee et al (2015) conducted massage therapy for three times a week with a time of 20 minutes each and carried out for four weeks in the meridian area or back. D.S Oliveira et al (2018) explained that therapeutic massage was carried out twice a week for 60 minutes each and was carried out for eight weeks. Subsequent research by Darsereh et al (2012) Giving back massage with aromatherapy oils (lavender, rose geranium, rosemary) was carried out twice a week for 30 minutes each and carried out for four weeks. Research Inas Abd Allah (2018) Giving back massage is carried out twice a week with 30 minutes each and carried out for eight weeks (a total of 16 massage sessions) The evaluation was carried out after the 8th and 16th sessions. Research by Seyed et al (2014) back massage given 2% geranium aromatherapy was done once a week for 30 minutes and was carried out for eight weeks. Meanwhile, Taavoni, (2013) performed massage with

pure oil twice a week for 30 minutes in four weeks. And Jan Williamson et al (2012) performed foot massage every two days for 45 minutes and carried out for 12 weeks.

3. Changes in menopausal symptoms
Changes in menopausal symptoms from seven articles obtained the same results, namely all articles described significant changes in the decrease in menopausal symptoms in intervention/experimental patients. Research by Yang Kyung Hee et al (2015) showed a significant reduction in menopausal symptoms ($U = 77.00$, $p = 0.020$) and Shin-Hur ($U = 76.00$, $p = 0.017$). There was a significant positive correlation between menopausal symptoms and Shin-Hur ($r = 0.497$, $p = 0.003$). Research D.S Oliveira et al (2018) Therapeutic massage in menopausal women has a significant effect on reducing menopausal symptoms, especially in insomnia, as measured by the ISI (Insomnia Severity Index) $P = 0.000$. Subsequent research by Darsereh et al (2012) Aromatherapy massage is effective in reducing

menopausal symptoms, as measured by the MRS (menopause rating scale) $P < 0.000$. Inas Abd Allah's research (2018) that women in the massage therapy group experienced a significant improvement in many symptoms of the menopausal transition period such as a decrease in the frequency of hot flushes and night sweats, a decrease in all urinary symptoms and dyspareunia. A very significant improvement was observed in psychological symptoms. The study of Seyed et al (2014) Aromatherapy massage reduced the mean depression score (MD: 0.51, 95% CI). Massage therapy also reduced depression scores (MD: 0.20, 95% CI) ($P < 0.001$). To detect the effects of aromatherapy and massage therapy separately, mean depression scores were compared and aromatherapy massage reduced depression scores more than massage therapy (MD: -0.31, 95% CI). Meanwhile, Taavoni, (2013) Massage therapy is effective in reducing psychological and somatic

symptoms during menopause. However, it had no effect on urogenital symptoms $P < 0.001$. And Jan Williamson et al (2012) foot massage therapy was less effective in reducing menopausal symptoms, $P < 0.001$.

Discussion

1. Duration of massage therapy intervention

Massage therapy intervention is one of the non-pharmacological nursing interventions included in relaxation therapy in reducing menopausal symptoms. Four articles selected in a systematic review explained that the 30-minute duration of administration was effective in reducing menopausal symptoms (Taavoni, 2013; Seyed et al 2014; Inas Abd Allah, 2018 and Darsereh et al, 2012). While three articles explain different things, namely massage done for 20 minutes and 60 minutes can reduce menopausal symptoms, 45 minutes is not able to reduce menopausal symptoms (Yang Kyung Hee et al, 2015; DS Oliveira et al, 2018 and Jan Williamson et al, 2012) .

2. Massage therapy time

The massage time also needs to be considered so that it can provide accurate measurement and intervention results both before and after massage therapy interventions. This review describes six different times of intervention, the intervention was carried out three times a week and within four weeks (Yang Kyung Hee et al, 2015). Twice a week for eight weeks (D.S Oliveira et al, 2018). Twice a week for four weeks (Darsereh et al, 2012 and Taavoni, 2013). Twice a week for eight weeks (Inas Abd Allah (2018). And once a week for eight weeks (Seyed et al, 2014). Twice a day for 12 weeks (Jan Williamson et al 2012). All interventions were performed at night. days because at that time it is very effective to grow the hormone melatonin and endorphins so that it helps menopausal women reduce menopausal symptoms such as hot flushes, night sweats and insomnia and anxiety.

3. Changes in menopausal symptoms

The benefits of massage therapy interventions reviewed in this systematic review are a decrease in

menopausal symptoms, massage therapy is scientific manipulation of the body's soft tissues, by rubbing. This manipulation is effective for stimulating the parasympathetic nervous system and promoting relaxation, reducing insomnia, improving sleep patterns, increasing alertness and ability to concentrate, and reducing anxiety, and reducing stress-related hormones such as epinephrine and cortisol. (Beth, 2014). Massage therapy can help women when they experience menopause symptoms at night because it can stimulate the pituitary, adrenal, thyroid, and parathyroid glands, which help balance hormone production and reduce the number of hot flushes. Long-term results can maintain immunity, reduce muscle tension, and create a more positive body image, (Charles, 2014).

The seven articles reviewed all explained different results that massage therapy techniques performed on the back were more effective in reducing menopausal symptoms after intervention and massage therapy techniques performed on the legs were

less effective in reducing menopausal symptoms.

Conclusion

After being given massage therapy intervention in the experimental group, there was a significant decrease in menopausal symptoms, but from the location and duration of giving massage therapy, it is necessary for further researchers to consider this matter more deeply.

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