

# EFFECTIVENESS AND EFFICIENCY OF MASSAGE THERAPY IN PAIN MANAGEMENT OF VAGINAL DELIVERY

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**Kutipan:** Wulandari, Y. (2016). Effectiveness and Efficiency of Massage Therapy in Pain Management of Vaginal Delivery. *Jurnal Keperawatan Muhammadiyah*, 1 (2)

## INFORMASI

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**Keywords:**  
Massage therapy, vaginal delivery, pain

## ABSTRACT

**Objective:** to identify the effectiveness and efficiency of massage therapy in pain management of vaginal delivery.

**Methods:** This article was review article which will review several article from several databased to answer the clinical question. The clinical question was “how is the effectiveness and efficiency of massage therapy for pain management during vaginal delivery process?. Advence search technique was used during searching the articles in Cochrane library, Ovid medline, EBSCO, and Pubmed. “Massage therapy or massage”, “spontaneous or vaginal”, “delivery or labor or childbirth”, “pain management or pain manage”, “pain scale”, “anxiety”, and “family participation” was used as keywords to searching in those databased.

**Results:** four articles were found. However only three articles which suitable to answer the clinical question. The tittle of those articles were “Effects of massage on pain and anxiety during labour: a randomized controlled trial in Taiwan”, “Effect of massage therapy on severity of pain and outcome of labor in primipara”, and “Massage or music for pain relief in labour: A pilot randomised placebo controlled trial”.

**Conclusion:** Massage therapy is more effective and efficiency reduces pain on stage 1 of vaginal delivery when combined with standard care (breathing therapy).

## **BACKGROUND**

Women who perform vaginal delivery always experience with pain during childbirth, especially when active phase of stage 1 of vaginal delivery. This pain is physiological pain caused by contraction and dilation of the cervix and this pain should be addressed. Usually, Indonesia nurses use standard care that is breathing exercise to help patients who have pain during vaginal delivery process. Nurses want to look for other alternatives to give a better care for the delivery mother, and

unexpectedly found an article about massage therapy as non-pharmacology therapy to pain management. Currently, nurses want to try using massage therapy for pain management in vaginal delivery. Massage therapy relieves pain of vaginal delivery and also has other benefits, that is reduce anxiety. In addition, massage therapy is also cost effective and increase family participation in childbirth. But nurse still confuse about the effective and efficiency of massage therapy for pain management during vaginal delivery process.

## **METHOD**

This article review will identify articles which answer the clinical question. The clinical question was "how is the effectiveness and efficiency of massage therapy for pain management during vaginal delivery process?". The population in this article review is women with vaginal delivery pain. The intervention was massage therapy. The comparison was standard treatment which is deep breathing and the outcomes were pain intensity, intensity of anxiety and family participation.

This is a treatment question. Therefore, the first search for best evidence to answer PICO question is systematic reviews of randomized controlled trials (RCTs) and RCTs. The source of evidence that uses in this evidence based nursing report was Cochrane library, Ovid medline, EBSCO, and Pubmed. The articles searched using keywords "massage therapy or massage", "spontaneous or vaginal", "delivery or labor or childbirth", "pain management or pain manage", "pain scale", "anxiety", and "family participation". During the search of article process, the author uses the "advanced search" and "history" provided by the data base to facilitate the search for accurate article by using "or", "and", "no", "\*", "# and "\$".

## **RESULTS**

The total number of articles found 4 articles that can answer PICO question. However, 1 of the article was not suitable to answer the clinical question. The last three articles found to answer the PICO treatment question that were one systematic reviews and two RCTs. The first article was Effects of massage on pain and anxiety during labour: a RCTs in Taiwan by Mei-Yueh Chang, Shing-Yaw Wang, and Chung-Hey

Chen. The second article was Effect of Massage Therapy on Severity of Pain and Outcome of Labor in Primipara by N. Khoda Karami, A. Safarzadeh, and N. Fathizadeh. And the last study was massage or music for pain relief in labour: A pilot randomised placebo controlled trial by L. Kimber, M., McNabb, C., Mc Court, A. Haines, and P. Brocklehurst

## **DISCUSSION**

The design/method in all of articles were RCTs. But every studies conducted randomization in different ways. The first and the second study conducted single blinding and the third study was not possible conduct blinding. The next allocation in first study was concealed from the person entering women into the trial. The second study used sealed envelope to allocation of concealed and in the third study, appropriate class was organised for those allocated to the intervention or placebo arm of the trial.

The samples of first and second studies were primiparous (n=83 and n=60), while a third study using primiparous and multiparous (90). The first and third study describes a significant baseline of sample, while the second study did not explain it in detail. The first reported loss to follow-up 27%, both in intervention and control groups. The third study report loss to follow up 2% in placebo group. The second study did not report about the loss to follow-up. Both of first and third study described the cause of loss to follow-up in details.

The major variable in the first study is massage therapy as independent variable and pain and anxiety as dependent variable. The second study, the variable independent is massage therapy using effleurage technique and dependent variable is pain. And the third study, there are two independent

variables that are massage with relaxation technique and music with relaxation technique and dependent variable is pain.

The instrument that used to measure the variable in first study was present behavioral intensity (PBI) by Bonnel & Boureau 1985 and visual analogue scale for anxiety (VASA). The reliability PBI was 100% (n=3). The concurrent validity of PBI was supported by Bonnel and Boureau (1985) with the self-reported present pain intensity (PPI) scale and correlations between the PBI and PPI were 0.45, 0.50 and 0.44. The reliable, valid and sensitive of VASA self-reported for measure the study of subjective patient experiences including pain, nausea, fatigue and dyspnoea by Gift (1989). The instrument in the second and third study is visual analogue scale (VAS) by Capogna et al (1996). The validity and reliability of the questionnaire in second study was approved by content validity and equivalence test.

The data analysis that used first study was mean (SD), minimum, maximum, and Two-sample t-tests. The mean differences between the control and massage groups for the PBI and VASA were produced with 95% confidence intervals. The second study was Chi square, t-test and descriptive statistic (spss software). And the third study was continuous measures, means and standard deviations, T-test. The categorical measures, frequencies were produced and compared using chi squared. Data were presented as relative risks (RR) with 95% confidence interval (CI) for discrete data and mean difference with 95%CI for continuous data. All of the analysis data is appropriate with types of data.

The first study reported that massage therapy was effective to reduce pain at stage 1, 2 and 3 also and lowers intensity of anxiety during vaginal

delivery process. Besides that it also showed effectiveness assistances. The second study reported that massage therapy was effective to reduce pain at stage 1 and also speed up the duration of stage 1. And the third study reported that massage therapy was not effective to reduce pain in the third stage.

The first study is a level II studies that is RCTs. Thus, quality is valid for treatment question. In addition to the first study showed the significance of the decrease in pain with p. 0.001 (95% CI) and also reduce anxiety p. 0.04 (95% CI) at stage 1 of vaginal delivery. Moreover, this study showed the effectiveness assistance with p. 0.001 (95% CI). The limitation in this study is the loss follow-up more than 20%. The second study did not report on baseline data, loss of follow-up, and lack of detail in explaining the process blinding. However, this study reported significant difference in pain reduction in stage 1 of vaginal delivery between the intervention and control groups. The mean score of severity of the pain at cervical dilatations of 4, 8 and 10 Centimeters was significantly different between the groups (p= 0.009, p=0.014 and p= 0.01, respectively). However, it is less clear in explaining the validity and reliability of the Instrument. The Third study reported in detail about RCTs, the weaknesses in this study is did not do a sample blinding. And the results of this study showed no significant difference in pain reduction at stage 2 of labor between the two groups.

There are heterogeneity methods of doing massage therapy, but basically they have similarity that are massage direct contact between skin to skin and doing when the contractions occur. At the same time, it is also carry out breathing therapy to get better result. Delivery mothers prefer their husband or family be willing to assist and help

during the birth process. Massage therapy can be applied by nurses and also husband or family that have taught by nurses to reduce pain and anxiety in the first stage of labor primiparous mothers.

### **CONCLUSION**

Massage therapy is more effective and efficiency reduce pain on stage 1 of vaginal delivery when combined with standard care (breathing therapy). Moreover, massage therapy is increasing family partisipant and also slightly reduce maternal anxiety. But it can not be done in women who have complications during pregnancy. And the characteristics of vaginal delivery mother are gestation age 263-294 days , age of maternal 20-35 years, and maternal weight 54-80 kg.

### **DAFTAR PUSTAKA**

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### **ACKNOWLEDGEMENT**

I would like to say thank you to health science faculty members who were guidance me to finish writing this article.