

Comparison Of Giving The Rebozo Technique And Oxytocin Massage To The Length Of Labor At The Sukatani Health Center, Bekasi Regency, West Java

Siti Yuyu Ratnasari^{1*}, Feva Tridiyawati²

^{1,2}Abdi Nusantara College of Health Sciences, Indonesia

*Corresponding Author:

Email: yayuamrina@gmail.com

Abstract.

Background: Complications in the length of time of delivery can cause the mother's blood flow through the placenta to decrease so that it has an impact on the occurrence of asfexia in newborns. One way to accelerate the progress of labor is by giving the rebozo technique and oxytocin massage. The results of the data report from the Dian Medika Jayanti Clinic, Tangerang Banten Regency, obtained information that in 2022 out of 365 mothers who gave birth, 157 cases were found with prolonged labor so that sometimes referrals were made, while the rebozo technique and oxytocin massage had not been carried out at that location. Purpose of Writing: Knowing the comparison of giving the rebozo technique and oxytocin massage to the length of the second stage in mothers giving birth at the Dian Medika Jayanti Clinic, Tangerang Regency. Research Method: quasy experiment with posttest only design with control group design. The sample is 30 mothers giving birth with total sampling technique. Intervention for 5-10 minutes and repeated 3 times. Bivariate analysis using the Mann Whitney test. Results: The results of the univariate study mean the length of the second stage of labor by administering the rebozo technique was 58.00 minutes and 30.93 minutes. The average length of the second stage of labor with oxytocin massage was 67.00 minutes. The results of the Mann Whitney bivariate test for the second stage of labor were 0.021. Conclusions and Suggestions: There are differences in giving the rebozo technique and oxytocin massage to the length of the second stage of labor in mothers. Midwives are expected to speed up the delivery process, it would be better if the rebozo technique and oxytocin massage were given simultaneously so that the progress of labor would go faster.

Keywords: *Rebozo Technique, Oxytocin Massage, Length of Labor and Maternity.*

I. INTRODUCTION

Childbirth is a physiological process that is experienced by everyone, but these physiological conditions can become pathological if a mother does not know the physiological conditions and a helper or health worker does not understand how physiological childbirth is conducted and its management in order to help reduce maternal mortality, according to the 2015 MDGs which is replaced by SDGs (*Sustainable Development Goals*) (Walyani et al., 2019). According to *World Health Organization* (WHO), 99% of maternal deaths occur in developing countries, estimated around 239/100,000 live births. This is inversely proportional to developed countries, with an estimation of 12/100,000 live births. Maternal mortality rate in developed countries such as Europe and North America reaches 12 per 100,000 live births, and around 7 per 100,000 live births in Australia and Zealand. Meanwhile, the maternal mortality rate in developing countries is 415 per 100,000 live births (World Health Organization, 2018). The maternal mortality rate in ASEAN countries are still quite high. Southeast Asia such as the Philippines has maternal mortality rate of 114 per 100,000 live births, whereas Vietnam has 54 per 100,000 live births, Thailand 20 per 100,000 live births, Brunei 23 per 100,000 live births, and Malaysia 40 per 100,000 live births (World Health Organization, 2018). According to the Indonesian Health Profile 2019, there was a decrease in maternal mortality during the 1991-2015 time period, from 390 to 305 per 100,000 live births. If compared to the 2015 *Millennium Development Goals* (MDGs) which has the target goal of reducing the maternal mortality rate to 102/100,000 live births, the maternal mortality rate does not reach the MDGs target.

The number of maternal deaths by province in 2018-2019 has decreased from 4,226 to 4,221 maternal deaths in Indonesia. In the Banten province, the number of maternal deaths reaches 329 maternal deaths, with 34 maternal deaths found within Tangerang District alone. In Dian Medika Jayanti Clinic, which is located within the Tangerang Regency, there was no maternal death found from 2019-2020. Whereas in 2021, there was 1 case of maternal death found (Ministry of Health of the Republic of Indonesia, 2021).

Based on data from the Indonesian Health Profile, the most common cause of maternal death in 2019 was bleeding, one of which was caused by prolonged labor, around 4.3% (Ministry of Health of the Republic of Indonesia, 2021). Within Banten province, some of the causes of prolonged labor include bleeding (30.3%), hypertension in pregnancy (27.5%), infection (4.5%), circulatory system disorders (14.6%) and other causes. Prolonged labor is one of the causes of maternal death, which is about 22.5%. In Dian Medika Jayanti Clinic, 1 case of maternal death was found in 2022, due to prolonged labor caused by bleeding (Banten Provincial Health Office, 2021). Complications relating to the duration of childbirth, fatigue, and stress on the mother can cause the mother's blood flow from placenta to fetus decrease. As a result, the flow of oxygen to the fetus is reduced, resulting in fetal distress, which can cause asphyxia. Factors related to the duration of second stage of labor include maternal age, parity, fundal height, gestational age, time interval from previous to current pregnancy, daily activities during pregnancy, and physiotherapy (Machmudah, 2016).

In order to prevent complications in childbirth mentioned above, health workers, especially midwives, have responsibilities and challenges in providing adequate care to assist in the delivery process. However, this is not an easy task because every woman has different biological, psychological, social, spiritual, cultural and educational backgrounds, which impacts how the patient expresses and perceive pain during labor, which is a natural part of the childbirth process (Hamilton, 2016). Although non-pharmacological approaches in managing pain and accelerating the progress of labor have been studied extensively, their application in hospitals is still very limited. In practice, it is not as easy as imagined because there are no clear guidelines on how to accelerate the progress of labor naturally (Maryunani, 2016). One way to accelerate the progress of labor is by giving oxytocin massage. Oxytocin massage is a light touch or massage towards the spine, starting from the 5-6th rib to the scapula, which can cause a relaxing effect. The relaxation experienced by the mother stimulates the brain to reduce adrenaline levels and increase the production of oxytocin, which is a factor in the emergence of adequate uterine contractions (Rosemary, 2021). By doing oxytocin massage, it can improve blood circulation and stretch the muscles in order to reduce pain experienced during labor (Simkin, 2017). The steps in conducting oxytocin massage must be considered carefully so that it produces a beneficial effect. One of the steps that needs to be considered is the method of massage for each mother with a different body posture. For example, an obese mother must be massaged with clenched hands, whereas mothers who are underweight or have normal weight can be massaged with the left and right thumbs or the back of the left and right forefingers. In addition, the duration of oxytocin massage also needs to be considered.

A good duration for oxytocin massage is around 3-5 minutes, repeated up to 3 times. After finishing the massage, clean the remaining baby oil and compress the mother's back with warm towel (Susilo, 2016). In accordance with the results of previous research conducted by Qonitun through data analysis of the Sample *t-Test* (*Independent sample t-Test*), it was found that there was an effect of oxytocin massage on the length of the second stage of labor (Qonitun, 2020). Subsequent research conducted by Ekayani (2017) found that there was an effect of giving a combination of relaxation and massage techniques on the length of time in labor with indicators of cervical dilatation. Wijaya, in his research, can see that the average pain after treatment in the oxytocin massage group with the most pain category was mild pain, namely 90.0%, while the group without oxytocin massage, the most pain category was moderate pain, namely 68.4%. The reduced pain can facilitate the flow of blood that carries oxygen to the uterus, when oxygen in the uterus is sufficient, contractions can go well so that they can accelerate the opening during the first stage of labor (Wijaya et al., 2018). According to Iversen et al. (2017), The Rebozo technique originates from Latin America, Rebozo is a long cloth that Mexican women usually wear to carry out their daily activities. This cloth can be used to help couples feel comfortable during the labor process with techniques that can be learned with the partner. The jarik method of shaking the apple tree as part of the rebozo technique has the aim of relaxing the muscles of the pelvis and buttocks. This method can be used during contractions and between contractions. The use of rebozo or jarik gives a sensation like a massage on their backs and stomachs. The comfort that comes from shaking the scarf around the hip area also makes their hip muscles feel relaxed and comfortable.

Based on research, Iversen et al. (2017) regarding the rebozo technique for overcoming fetal malposition, there were 7 respondents, PROM was 3 respondents, fetal decline was 3 respondents, pain relief

was 1 respondent, and strengthening contractions was 2 respondents. The rebozo technique can be performed in a standing, hands and knees position, as well as lying down and is effective for overall pain relief and can increase comfort during labour. The results of Nurpratiwi et al. (2020) with the title of the rebozo technique on pain intensity in the first stage of active phase and duration of labor in multigravida mothers, it was found that the rebozo *shake the apples technique* and *rebozo shifting while lying down* can divert labor pain in the active phase of first stage and accelerate the delivery process in multigravid mothers. Results of data reports from the Clinic Dian Medika Jayanti, Tangerang Banten Regency, obtained information that in 2022 each month assisting births between 30-35 mothers, namely around 365 mothers giving birth, every month there are also 14-60 cases (157 cases) with long labor so that sometimes referrals are made. This condition illustrates that the duration of the first stage of labor sometimes occurs in mothers who give birth, this can increase the risk of death for the mother and newborn. According to the information obtained so far, the oxytocin massage method is often carried out, but not all of it is carried out, depending on the time available. So far, research has not been carried out at that place whether oxytocin massage has an effect on the length of labor. Meanwhile, the rebozo technique has never been done, but looking at the results of previous studies, it turns out that the rebozo technique can accelerate the first stage of labor. Based on this background, the authors feel interested in conducting research on " Comparison Giving Rebozo and Massage Techniques Oxytocin Against the Length of Stage II in Maternity Mothers at the Clinic Dian Medika Jayanti Tangerang Regency".

II. METHODS

Research design This is a quantitative study using a *quasi-experimental design* with a *posttest design only control group design*, namely the experimental design carried out in two different groups that received different training. Population taken in this study, is the whole mother giving birth in March 2023, who gave birth at Dian Medika Jayanti Clinic, Regency Tangerang as many as 30 respondents. The sample in this study is part or representative of the population studied. Sampling in this study using *total sampling technique*. According to Sugiyono (2019), the *total sampling* is taking the same sample as the existing population of 30 respondents. Reason taking the total sampling because amount is less population from 100. Sources of data were obtained from the results of observations and interviews about the length of second stage of labor.

The independent variable in this study is giving rebozo technique and massage oxytocin. The dependent variable in this study is length of second stage of labor. The instrument used in this study was an observation sheet to see the length of the second stage in the two groups. The rebozo technique and oxytocin massage are carried out in accordance with the SOP with duration for 3-5 minutes and repeated 3 times. The data that has been collected in this study is then processed using a computer program with several stages, namely recapitulating the results of the answers to the questionnaires filled in by respondents and then carrying out *Editing, Coding, Processing, Cleaning, and Tabulating*. Data analyzed use analysis univariate mark *mean* and analysis bivariate *Mann Whiteney*.

III. RESULTS AND DISCUSSION

Table 1. The average duration of the second stage of labor for women who are given Rebozo technique at the Dian Medika Jayanti Clinic, Tangerang Regency

Old Age II	Average	std. Deviation	Max	Min
Rebozo technique	58.00	23,740	95	40

Based on the results of the study in Table 1, it is known that the length of the second stage of labor in women giving the rebozo technique average = 58.00 minutes std. deviation = 23.740 minutes maximum = 95 minutes and minimum = 40 minutes.

Table 2. Average duration of second stage of labor for women giving oxytocin massage at Dian Medika Jayanti Clinic, Tangerang Regency

Old Age II	Average	std. Deviation	Max	Min
Oxytocin Massage	67.00	24,187	110	45

Based on the results of the study in table 2, it is known that the length of the second stage of labor in women giving oxytocin massage averages = 67.00 minutes; std. deviation = 24.187 minutes; maximum = 110 minutes and minimum = 45 minutes.

Table 3. Differences in giving the Rebozo technique and oxytocin massage to the length of the second stage for women giving birth at RSUD Balaraja, Tangerang Regency

Length of Labor in First Stage	Means	Mean difference	P Value
Rebozo technique	58.00	9.00	0.021
Oxytocin Massage	67.00		

The Mann Whitney test show that the significance value of the treatment after giving the rebozo technique and oxytocin massage is 0.021 ($p < 0.05$), so it can be concluded that H_0 is rejected and H_a is accepted, thus it can be concluded that there are differences in giving the rebozo technique and oxytocin massage to the length of the second stage in women giving birth at the Clinic Dian Medika Jayanti, Tangerang Regency.

Discussion

1. The average length of the second stage in women giving birth when giving the Rebozo technique at the Dian Medika Jayanti Clinic, Tangerang Regency

Based on the results of the study, it can be seen that the length of the second stage of labor in women giving the rebozo technique have an average = 58.00 minutes; std. deviation = 23.740 minutes; maximum = 95 minutes and minimum = 40 minutes. The duration of the second stage in primi: 1,5 - 2 hours, in multi 1/2 - 1 hours (Indrayani, 2016). One way to accelerate the progress of labor is by giving the rebozo technique and oxytocin massage. Iversen et al. (2017) explained that through the rebozo technique it can expand the pelvic cavity so as to allow the fetus to move more freely in the birth canal process without obstacles and reduce the lowest part of the fetus and improve the position of the malpositioned fetus so that the delivery process goes quickly.

The research results of Iversen et al. (2017) regarding the rebozo technique for overcoming fetal malposition, there were 7 respondents, PROM was 3 respondents, fetal decline was 3 respondents, pain relief was 1 respondent, and strengthening contractions was 2 respondents. The rebozo technique can be performed in a standing, hands and knees position, as well as lying down and is effective for overall pain relief and can increase comfort during labour based on the research. Researchers assume that there is an acceleration of the second stage of labor in mothers who receive the rebozo technique. This condition allows the fetus to move more freely in the birth canal which results deceleration of the lowest part of the fetus, in addition to improving the position of the fetus which is not suitable to become suitable to the birth canal .

2. Average Length of Second Stage of Birth in Giving Oxytocin Massage at the Dian Medika Jayanti Clinic, Tangerang Regency

Based on the results of the study, it can be seen that the length of the second stage of labor in women giving oxytocin massage have an averaged = 67.00 minutes; std. deviation = 24.187 minutes; maximum = 110 minutes and minimum = 45 minutes. Complications of prolonged childbirth, fatigue, stress on the mother can cause the mother's bloodstream through placenta reduces, so causes oxygen flow to fetus diminishes, and as a result become fetal distress and can cause asphyxia. Related factors that can cause prolonged duration of the second stage of labor are parity, fundus height and physiotherapy (Machmudah, 2016). One way to accelerate the progress of labor is by giving oxytocin massage (Rosemary, 2021). Oxytocin massage is light touch or backbone massage that start from the 5th - 6th rib to the scapula which can raises relaxation effect (Yuliatun, 2018). Relaxation that the mother felt can stimulate brain to lower adrenaline hormone rate and increase oxytocin production which is emergence factor in adequate uterine contractions (Daily, 2015). The results of previous research conducted by Qonitun found that the frequency of contraction in mothers who received oxytocin massage was mostly 53.8%, getting 4 times contraction frequency in 10 minutes so that it can accelerate the progress of labor (Qonitun, 2020).

Subsequent research conducted by Ekayani (2017) showed that the results of univariate analysis of the length of labor in the first stage of the active phase in the oxytocin massage group were mostly normal 86.7%, the remaining 13.3% were in the fast category. Rahmawati got the result that oxytocin massage had

an average duration of the first stage of labor is 16.85, while the group that using deep breathing techniques had an average of 40.50 (Rahmawati, 2019) . Researcher assume that there is progress in the second stage of labor in mothers who get oxytocin massage, this is due to the light touch of the spinal massage making the mother more relaxed. When the mother feels calm and relaxed, the fear that arises can be overcome so that excess adrenaline can be anticipated, and pain-inhibiting substances can be secreted properly. When the oxygen in the uterus is sufficient, the contractions can go well so that the mother is able to push to the maximum which will result in smooth delivery in the second stage .

3. Differences in giving the Rebozo Technique and Oxytocin Massage to the Length of the Second Stage in Maternity in the Dian Medika Jayanti Clinic, Tangerang Regency

The Mann Whitney test shows that the significance value of the treatment after giving the rebozo technique and oxytocin massage is $0.021 < 0.05$, so it can be concluded that H_0 is rejected and H_a is accepted, thus it can be concluded that there are differences in giving the rebozo technique and oxytocin massage to the length of the second stage in maternity at the Dian Medika Jayanti Clinic, Tangerang Regency. The success of oxytocin massage can not be separated from the factors that influence it. Influencing factors of success oxytocin massage are psychological preparation, comfort for the mother, implementation of oxytocin massage, family support, and support from health workers (Tamsuri, 2017). According to Ekayani (2017) the rebozo technique helps couples provide a sense of comfort during the labor process with techniques that can be learned with partners. The rebozo technique can flex the pelvic muscles and ligaments allows the fetus to move more freely in the birth canal process without obstacles and reduces the incidence of spontaneous breathing failure (Cohen & Thomas, 2019). The rebozo technique makes the mother have a pleasant psychological experience that can cause stimulus-response signals by the process of interacting during labor with the rebozo technique which can also interact with husbands and providers by cooperating as mediators in pain management (Iversen et al., 2017) .In accordance with the results of Iversen et al. (2017) there is an effect of the rebozo technique on the progress of labour. The rebozo technique is effective for overall pain management and can increase the feeling of comfort during labor and impact on the progress of labor.

The results of Nurpratiwi et al. (2020) research with the title Rebozo Technique Against Intensity of Pain in the First Stage of the Active Phase and Duration of Labor in Multigravida Mothers, it was found that the Rebozo technique shakes the apples and rebozo shifting while lying down can divert labor pain in the active phase I stage and accelerate the delivery process in multigravida mothers. The results of Nurpratiwi et al. (2020) study showed that there was a difference in the average intensity of pain during the first active phase of labor in multigravid women before and after administration of RSTA & RSWLD (p value = 0.007). Researcher assumes that there are differences in giving the rebozo technique and oxytocin massage to the length of labor in the second stage of labor in women giving birth, this is due to the fact that through the rebozo technique the mother can maintain muscle strength in the abdomen and back, is able to increase self-confidence when facing the labor process so that it can accelerate progress of labor due to strong pressure from the pelvic floor caused by pelvic swaying during the rebozo technique. Meanwhile, for mothers who received oxytocin massage, even though it strengthened uterine contractions, the pelvic vertebrae did not change and if the mother experienced psychological disorders or high anxiety, the progress was not as fast as for mothers who received the rebozo technique. In fact, between the rebozo technique and oxytocin massage there was progress in labor, but when compared to the progress of labor with by giving the rebozo technique it was faster than oxytocin massage. It would be better if the rebozo technique and oxytocin massage were given simultaneously so that the progress of labor would go faster.

IV. CONCLUSION

Based on the results of research about comparison of giving the rebozo technique and oxytocin massage to the length of the second stage in women giving birth at the Dian Medika Jayanti clinic, Tangerang Regency, so the writer conclude that the average length of the second stage of labor in mothers at giving the rebozo technique in the Dian Medika Jayanti clinic, Tangerang Regency is 58.00 minutes. The average length of the second stage in the mother giving birth on delivery by giving oxytocin massage in Dian

Medika Jayanti Clinic Tangerang Regency is 67.00 minutes. There is differences in giving rebozo technique and oxytocin massage to the length of the second stage in women giving birth at the Dian Medika Jayanti clinic Tangerang Regency with a value of $p = 0.021$.

V. SUGGESTION

Maternity is expected to know and to apply the *Rebozo* technique and oxytocin massage when facing the second stage of labor in order to reduce pain and speed up the delivery process. Medical personnel is expected to provide services to mothers in childbirth in an effort to improve the quality of midwifery services for mothers, especially to reduce labor pain and speed up the delivery process, it would be nice if the rebozo technique and oxytocin massage were given simultaneously so that labor progress would go faster. This study expects the midwifery education institution to get integrate in learning related to the maternity lessons for mothers in labor in reducing pain and increasing the progress of labor with the Rebozo technique and oxytocin massage and journal subscription.

REFERENCES

- [1] Cohen, S. R., & Thomas, C. R. (2019). Rebozo Technique for Fetal Malposition in Labor. *Journal of Midwifery and Women's Health*, 3(2).
- [2] Dinas Kesehatan Provinsi Banten. (2021). *Profil Kesehatan Provinsi Banten Tahun 2020*.
- [3] Ekayani, K. (2017). Kombinasi Teknik Relaksasi dan Pijatan Bagi Ibu Bersalin Terhadap Penurunan Intensitas Nyeri, Lama Persalinan dan APGAR Score Bayi Baru Lahir. *Jurnal Kesehatan Prima*, 11(2), 93–103.
- [4] Hamilton, P.M. (2016). *Pereda Nyeri dan Kenyamanan dalam Persalinan* (D.M.Frasse & M.A.Cooper(eds.)). EGC.
- [5] Hariani, R. (2015). *Pengaruh Metode Massage Terhadap Pengurangan Intensitas Nyeri Pada Persalinan Kala I di Klinik Bersalin Fatimah Ali I Marindal Medan*.
- [6] Indrayani, D. (2016). *Asuhan Persalinan dan Bayi Baru Lahir*. CV Trans Info Media.
- [7] Iversen, M. L., Midtgaard, J., Ekelin, M., & Hegaard, H. K. (2017). Danish women's experiences of the rebozo technique during labour: A qualitative explorative study. *Sexual & Reproductive Healthcare*, 11, 79–85. <https://doi.org/10.1016/j.srhc.2016.10.005>
- [8] Kementerian Kesehatan Republik Indonesia. (2021). *Profil Kesehatan Indonesia Tahun 2020*.
- [9] Machmudah. (2016). *Pengaruh persalinan dengan komplikasi terhadap kemungkinan terjadinya postpartum blues di kota semarang*. Program Magister Ilmu Keperawatan Depok.
- [10] Maryunani, A. (2016). *Nyeri dalam Persalinan Teknik dan Cara Penanganannya*. Trans Info Media.
- [11] Nurpratiwi, Y., Hadi, M., & Idriani. (2020). Teknik Rebozo terhadap Intensitas Nyeri Kala I Fase Aktif dan Lamanya Persalinan pada Ibu Multigravida. *Jurnal Keperawatan Silampari*, 4(1).
- [12] Qonitun, U. (2020). Pengaruh Pijat Oksitosin Terhadap Frekuensi His, Durasi His dan Lama Persalinan Kala I pada Ibu Inpartu di BPM Asri Tuban. *Jurnal Kesehatan Masyarakat Khatulistiwa*, 7 (1), 1–5.
- [13] Rahmawati. (2019). Pengaruh Pijat Punggung Terhadap Adaptasi Nyeri Persalinan Fase Aktif Lama Kala II Dan Perdarahan Persalinan Pada Primigravida. *Jurnal Kesehatan Masyarakat Nasional*, 8(5).
- [14] Rosemary, M. (2021). *Nyeri Persalinan*. EGC.
- [15] Simkin, P. (2017). *Kehamilan, Melahirkan dan Bayi*. Arcan.
- [16] Sugiyono. (2019). *Statistika untuk Penelitian*. Alfabeta.
- [17] Susilo, R. (2016). *Panduan Asuhan Nifas dan Evidence Basedn Practice*. Deepublish.
- [18] Tamsuri, A. (2017). *Konsep dan Penatalaksanaan Nyeri*. EGC.
- [19] Walyani, Siwi, E., & Purwastuti, E. (2019). *Asuhan Kebidanan Persalinan dan Bayi Baru Lahir*. Pustaka Baru Press.
- [20] Wijaya, M., Bewi, D. W., & Rahmiati, L. (2018). *Pengaruh Pijat Oksitosin Terhadap Nyeri Dan Kemajuan Persalinan Pada Ibu Bersalin di Puskesmas Garuda*.
- [21] World Health Organization. (2018). Maternal Mortality. In *World Health Organization*. <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality>.
- [22] Yuliatun, L. (2018). Penanganan Nyeri Persalinan dengan Metode Nonfarmakologis. *Jurnal Ners Lentera*, 7(2), 114–126.