e-ISSN 3089-8943
p-ISSN 3089-896X
Journal of Health Science Vol 1 (1) September 2024, page 29-35
Received 30 September; Revised 30 September; Accepted 30 September 2024

Effectiveness of the combination of pelvic rocking and acupressure Sp 6 techniques with a combination of rebozo and counterpressure techniques on the duration of labor in the first stage in primiparous

Anis Kumala Dewi[1], Sa'adah Mujahidah*[1], Hermeksi Rahayu[2], Dewi Mayangsari[1]

[1]Department of Obstetrics, Faculty of Nursing and Health Sciences, Universitas Karya Husada Semarang, Indonesia.
[2]Department of Nursing, Faculty of Nursing and Health Sciences, Universitas Karya Husada Semarang, Indonesia
* Corresponding Author: saadah.mujahidah16@gmail.com

ABSTRACT

Background: Women who are in labor for a long time can bleed because their uterus isn't working right, they are tired, or they are shocked. The baby may have a higher chance of suffocating badly, getting an infection, or getting hurt all at the same time. Acupressure, rebozo, pelvic rocking, and counterpressure can all change how long labor lasts. **Objective:** This study looked at how long stage I labor lasted for women who had never given birth before area when pelvic rocking, acupressure SP 6 techniques, rebozo, and counterpressure techniques were used together. **Methods:** This study uses a quantitative method with an experimental approach, especially a control group design with only a posttest. The sampling method was chosen by chance, and the sample size includes 12 interventions using a combination of pelvic rocking and acupressure SP6 and 12 interventions using a mixture of rebozo and counterpressure techniques. Using the Mann-Whitney test to look at the data. A partograph observation sheet is used in this study tool. **Result**: The pelvic rocking and acupressure techniques work less well than the rebozo and counterpressure techniques at shortening labor (ρ-value) by 0.326 units, which is more than 0.05. The mean rank for the rebozo technique and counterpressure is 13.88, while the mean rank for the pelvic rolling technique with acupressure SP six is 11.13 of them all. **Conclusion:** For the first few hours of labor, pelvic rocking along with SP6 works differently than rebozo and counterpressure. To speed up labor, pelvic rocking, acupressure at SP 6, the rebozo method, and counterpressure can be used.

KEYWORD: acupressure SP6, conterpresure, duration of labor, pelvic rocking, rebozo

INTRODUCTION

Labour comprises a sequence of procedures culminating in the expulsion of the product of conception by the mother(Massov et al., 2024). The childbirth process encompasses four critical factors: power, passage, passenger, psyche, and the equally significant aspect of labor assistance (Dewie & Kaparang, 2020; Wati et al., 2022). Any issue with one of these elements may result in complications during labor. Prolonged labor has been identified as a contributing factor to elevated death and morbidity rates in mothers and fetuses (Astuti et al., 2020; Mujahidah, 2020). Mothers experiencing lengthy labor face heightened risks of hemorrhage from uterine atony, birth canal laceration, infection, tiredness, and shock. At the same time, the fetus is at increased risk for severe hypoxia, brain damage, disease, and harm from mechanical forces (Mujahidah, 2020; Munafiah et al., 2022). Both pharmaceutical and non-pharmacological approaches can address prolonged kala I during delivery, with non-pharmacological options proving

Journal of Health Science Vol 1 (1) September 2024, page 29-35
Received 30 September; Revised 30 September; Accepted 30 September 2024
e-ISSN 3089-8943
p-ISSN 3089-896X

to be more successful and safer than pharmacological ones, which may include adverse effects. Numerous non-pharmacological methods to expedite prolonged labor, including breathing balls, prenatal yoga, pelvic rocking, and dance labor. This study selected pelvic rocking as a non-pharmacological method to expedite protracted labor (Astuti et al., 2021; Hu et al., 2021; Sulistiyowati et al., 2024).

Pelvic Rocking Exercises (PRE) are designed to strengthen the muscles of the waist and hips, facilitating the descent of the baby's head into the pelvic cavity in preparation for the delivery canal. The benefits of PRE encompass comparatively uncomplicated movements that do not want tools, designated locations, or specialized supervision (Astuti et al., 2021). Recent research indicated that abdominal exercises, pelvic rocking, and nipple stimulation were ineffective in expediting labor during stage 1 by enhancing contractions and cervical dilation in parturient women (Rajput & Jaiswal, 2021). What if the pelvic rocking technique is augmented by applying acupressure to the SP6 meridian point? A prior study indicates that acupressure on the SP6 meridian point has been shown to expedite the active phase I labor by 1-2 hours in primiparas (Mujahidah & Sari, 2020). Few studies have examined the efficacy of the combination of the two approaches. The simultaneous application of both strategies is anticipated to bridge the gap identified in prior research.

The rebozo technique can positively influence childbirth by enhancing comfort throughout labor. The rebozo technique can anatomically compress the lumbar to the coccygeal region using striated cloth, stimulating pelvic muscle stretching, releasing endorphins into the bloodstream, regulating contractions, and restoring balance during childbirth (Sulistiyowati et al., 2024). Prior research indicated that the rebozo shake and rebozo sifting procedures when performed in a supine position, can alleviate active phase I labor pain and expedite the birthing process in mothers (Bogren et al., 2021). Research supports the efficacy of the rebozo technique in facilitating cervical dilation and lowering the fetal head in mothers during the active phase of labor. The rebozo approach significantly enhances the progression of labor (Astuti et al., 2021; Sulistiyowati et al., 2024). If the rebozo technique is combined with counter-pressure, prior research indicates that counter-pressure massage influences the duration of the active phase of labor.

Research on the efficacy of the combination of the two approaches needs to be more extensive. It is anticipated that the implementation of these strategies will address the deficiencies identified in prior research. An early assessment conducted from June 2020 to June 2021 at the Demak II Health Center documented 23 instances of extended first-stage labor. Upon the occurrence of a case, the initial action should be to refer the patient to an appropriate healthcare facility. However, the current pandemic conditions present significant challenges due to the stringent procedures required. Consequently, the researcher aims to conduct non-pharmacological research titled "Effectiveness of a Combination of Pelvic Rocking and Acupressure Techniques SP 6 with Rebozo and Counterpressure Techniques on the Duration of Labor in Primipara at the Demak II Health Center Work Area," with the expectation that it may provide a solution for addressing prolonged labor cases.

METHODS

Design

This research is a quasy experiment research. The research design used Post-test only with control group design.

e-ISSN 3089-8943
p-ISSN 3089-896X
Journal of Health Science Vol 1 (1) September 2024, page 29-35
Received 30 September; Revised 30 September; Accepted 30 September 2024

Research Questions
How effectiveness of the combination of pelvic rocking and acupressure Sp 6 techniques with rebozo and conterpresure techniques on the duration of labour at stage I?

Sample and Settings
The type of sampling technique used was accidental sampling with a total sample of 24 respondents divided into 2 intervention groups the combination of pelvic rocking and acupressure Sp 6 techniques (n = 12) and combination rebozo and conterpresure techniques control group (n = 12). Respondents in this study were mothers in the active phase with an opening of 4-10 cm.

Variable
The combination of pelvic rocking and acupressure techniques Sp 6 with rebozo and conterpresure techniques is the independent variable, while the duration of labor in Stage 1 is the dependent variable.

Instrument
Measurement of labour duration using partograph observation sheet

Data Collections
This research was conducted from 15 October 2019 to 10 December 2019 at Demak II Health Center Work Area.

Data Analysis
Data analysis using mann whitney statistical analysis tests with p-<0.05

Ethical Consideration
This study has passed the ethical review test from the Ethics Committee of Stikes Karya Husada Semarang with Ethical Test Number 0064/KEP/UNKAHA/LPPM/XII/2021.

RESULTS

Table 1 **Effectiveness of the combination of pelvic rocking and acupressure Sp 6 techniques with a combination of rebozo and counterpressure techniques on the duration of labor in the first stage**

The variable	N	Mean	Mean Rank	Sum Of Rank	p-value
combination of pelvic rocking and acupressure Sp 6 techniques	12	232.50	11.13	133.50	0.326
combination rebozo and conterpresure techniques	12	247.50	13.88	166.50	

Based on Table 1, the average length of labor after being given a combination of pelvic rocking and SP6 techniques was 232.50 minutes (3 hours 50 minutes), with a minimum length of labor of 150 minutes (2 hours 50 minutes) and a maximum of 360 minutes. The mean length of labor after the combination of rebozo and counterpressure techniques was 247.50 minutes (4 hours, 12 minutes), with a minimum length of labor of 180 minutes (3 hours) and a maximum of 360 minutes (6 hours). The significant value

e-ISSN 3089-8943
p-ISSN 3089-896X
Journal of Health Science Vol 1 (1) September 2024, page 29-35
Received 30 September; Revised 30 September; Accepted 30 September 2024

(ρ value) is 0.326 > 0.05, so it can be stated that Ha is accepted; there is a difference in the effectiveness of the combination of pelvic rocking and acupressure Sp 6 techniques with the effectiveness of the combination of rebozo and counterpressure techniques on the duration of labor in Stage I. Based on the mean rank of the pelvic rocking technique and acupressure sp 6 of 11.13 while the effectiveness of the combination of the rebozo and counterpressure techniques of 13.88, so there is only a slight difference between the two by 2.75 minutes, it can be concluded that both combinations of techniques given are effective in reducing the length of labor in the first stage.

DISCUSSION

Theoretically, the pelvic rocking technique can train the muscles of the waist and hips and help the baby's head fall into the pelvic cavity towards the birth canal, which in turn facilitates the labor process and shortens the length of labor. (Misti et al., 2021). SP6 acupressure can reduce pain, increase contractions, block the transfer of pain stimuli, and increase endorphin levels in the blood. Pressure on the SP6 point can affect the reproductive organs, help facilitate birth and manage obstetric and gynecological disorders, help dilate the cervix to speed up delivery (Iffah et al., 2021).

This is in line with previous research, which states that there is a reduction in the first 90 minutes at the stage of the opening phase or kala 1 active phase of labor in postpartum mothers who use peanut balls compared to those who do not use this method. (Permatasari & Setyaningsih, 2021). Acupressure on the Sp6 meridian point has been shown to accelerate 1-2 hours of active phase I labor; acupressure on the Sp6 meridian point can be done to stimulate natural uterine contractions and make laboring mothers feel comfortable and relaxed with the emphasis on the meridian point so that the incidence of long labor can be avoided. (Mujahidah & Sari, 2020). Acupressure to accelerate the progress of labor is not only practical during the labor process but also practical if it is carried out routinely before the labor process, namely in the last weeks before childbirth. (Iffah et al., 2021).

The combination of pelvic rocking and SP6 techniques is very effective in accelerating labor; the test results prove that there is an acceleration of labor up to 2 hours faster than the maximum length of labor; it can be concluded that there is an influence or effectiveness of the combination of pelvic rocking and SP6 techniques on the size of labor in the first stage of primipara in the working area of Demak II Health Center. The average length of labor after being given rebozo and counterpressure was 247.50 minutes (4 hours, 12 minutes), with a minimum length of labor of 180 minutes (3 hours) and a maximum of 360 minutes (6 hours). This shows that after being given the rebozo and counterpressure techniques, the average length of labor has decreased by approximately 2 hours to become faster.

The rebozo technique is a nonpharmacological method for alleviating pain during labor. The motion of the rebozo is believed to soothe the mother and assist in positioning the baby within the birth canal; the appropriate twist might evoke a sensation akin to being embraced and stimulate the production of oxytocin, facilitating a smoother labor phase (Sulistiyowati et al., 2024). Counterpressure is an application technique of gate-control theory that uses massage methods to alleviate pain by suppressing pain signals and enhancing blood flow and oxygenation to tissues. Administering a twenty-minute massage to birthing moms during each contraction will alleviate discomfort more effectively. The massage will induce the body to release endorphins, which act as analgesics and promote well-being (Juniartati & Widyawati, 2018).

This research corroborates prior findings that the duration of labor, following the application of rebozo, averages less than 360 minutes during the active phase I in multigravida, indicating that this approach can influence labor duration. The duration of

e-ISSN 3089-8943
p-ISSN 3089-896X
Journal of Health Science Vol 1 (1) September 2024, page 29-35
Received 30 September; Revised 30 September; Accepted 30 September 2024

labor in the active phase should ideally not surpass 10 hours, although, in multigravida moms, it typically lasts around 6-8 hours. (Nurpratiwi et al., 2020). The delivery of an elderly primigravida mother with the rebozo technique occurs more rapidly, as the movements facilitated by this approach enhance maternal comfort. Proper cloth positioning will create a sensation like being embraced, so stimulating the release of oxytocin may reduce labor. Subtle motions in the rebozo technique may stimulate the parasympathetic nervous system, inducing a feeling of tranquility (Yuriatia & Khoiriyah, 2021).

Integrating rebozo and counterpressure techniques significantly expedites labor, with empirical evidence indicating a reduction in labor duration by up to 2 hours compared to the maximum labor length. It can be inferred that this combination exerts a notable influence on the duration of labor during the initial stage for primipara in the jurisdiction of Demak II Health Center. The labor duration after using pelvic rocking and SP6 techniques averaged 232.50 minutes (3 hours and 50 minutes). In contrast, the duration of labor after the implementation of rebozo and counterpressure techniques averaged 247.50 minutes (4 hours and 12 minutes). The combination of pelvic rocking and SP6 is more effective than the combination of rebozo and counterpressure in reducing the duration of labor during the first stage at Demak II Health Center. Both combinations could expedite the initial stage of labor by up to 2 hours compared to the maximum duration of labor.

The difference in the level of effectiveness can be caused by four factors: power, passage, passenger, and mother's psychic. In addition to these four factors, labor assistance is also essential. (Surtiningsih et al., 2016). Additional factors identified in the field may influence the labor process, such as age, parity, labor distance, and maternal understanding, as indicated by educational attainment. Any issues related to these factors can result in complications during labor. The inclusion criteria for this study comprised primiparous laboring mothers at 37-42 weeks of gestation, healthy pregnant women, and mothers without anxiety who were accompanied. According to the researcher's assumption, this difference in effectiveness is caused by different pain thresholds between research subjects, blood collection times, and the influence of companions and the environment during labor. The mother's discomfort with the rebozo treatment itself or with the researcher's arrival can also be a factor, as all laboring women are accompanied by their husbands or families during the labor process. Based on the test results, it can be concluded that the combination of pelvic rocking and SP6 is more effective than the combination of rebozo and counterpressure in accelerating the duration of labor in the first stage at Demak II Health Center. Although there are differences in effectiveness, the two combinations can each accelerate the length of labor.

Strengths and Limitations

The limitations of this study are that researchers have not used biomarker tests to determine whether there is an increase in oxytocin hormone in assessing labor acceleration or induction and confounding variables have not been tested.

Implications for Practice

It is hoped that future researchers can use biomarkers to ascertain the effectiveness of this non-pharmacological labour management in accelerating labour. Confounding variables such as socioeconomic, spiritual and cultural, nutrition, length of rest, and psychology may be associated with accelerated labour.

e-ISSN 3089-8943
p-ISSN 3089-896X
Journal of Health Science Vol 1 (1) September 2024, page 29-35
Received 30 September; Revised 30 September; Accepted 30 September 2024

CONCLUSIONS

The results of this study indicate that the combination of pelvic rocking and SP6 is more effective than the combination of rebozo and counterpressure on the duration of labor in primiparous mothers in Stage I with a p-value of (0.326). Midwives are expected to apply a combination of pelvic rocking and SP6 which is more effective than a combination of rebozo and counterpressure in accelerating labor in the first stage.

Conflict of Interest Statement

None

Funding Source

None

Author Acknowledgement

We would like to thank the laboring mothers at Demak II Health Center who are willing to be respondents.

REFERENCES

Astuti, L. P., Amelia, P. F., Wijayanti, H., & Mujahidah, S. (2020). Application Of The WBZ (Warm Belt Zinger) Method To The Intensity Of Labor Pain At The BL 31-32 Meridian Points In PMB Semarang City. *Health Notions*, *4*(11), 375–380. https://doi.org/10.33846/hn41105

Astuti, L. P., Siswanti, P., Munafiah, D., & Mujahidah, S. (2021). Effectiveness of Pelvic Rocking and Gym Ball Exercise Against of Duration of Labor in the First Stage. *Proceedings of the 1st Paris Van Java International Seminar on Health, Economics, Social Science and Humanities (PVJ-ISHESSH 2020)*, *535*, 685–687. https://doi.org/10.2991/assehr.k.210304.155

Bogren, M., Mwambali, S. N., & Berg, M. (2021). Contextual factors influencing a training intervention aimed at improved maternal and newborn healthcare in a health zone of the Democratic Republic of Congo. *PLoS ONE*, *16*(11 November), 1–14. https://doi.org/10.1371/journal.pone.0260153

Dewie, A., & Kaparang, M. J. (2020). Efektivitas Deep Back Massage dan Massage Endorphin terhadap Intensitas Nyeri Kala I Fase Aktif di BPM Setia: Effectiveness Deep Back Massage and Massage Endorphin Against Intensity of Pain in Active Phase I in BPM Setia. *Poltekita: Jurnal Ilmu Kesehatan*, *14*(1), 43–49.

Hu, Y., Lu, H., Huang, J., & Zang, Y. (2021). Efficacy and safety of non-pharmacological interventions for labour pain management: A systematic review and Bayesian network meta-analysis. *Journal of Clinical Nursing*, *30*(23–24), 3398–3414.

Iffah, U., Darwin, E., & Defrin. (2021). Pengaruh Teknik Akupresur LI4 Dan SP6 Terhadap Kadar Endorfin Dan Kemajuan Persalinan Pada Kala I Fase Aktif. *Jurnal Ilmiah Pannmed (Pharmacyst, Analyst, Nurse, Nutrition, Midwivery, Environment, Dental Hygiene)*, *16*(1), 229–234.

Juniartati, E., & Widyawati, M. N. (2018). Literature Review: Penerapan Counter Pressure Untuk Mengurangi Nyeri Persalinan Kala I. *Jurnal Kebidanan*, *8*(2), 112–119.

Massov, L., Robinson, B., Rodriguez-Ramirez, E., & Maude, R. (2024). "Giving birth on a beach": Women's experiences of using virtual reality in labour. *PLoS ONE*, *19*(6 June), 1–14. https://doi.org/10.1371/journal.pone.0304349

Misti, A., Puspitasari, L., & Ernawati, E. (2021). Efektifitas Abdomen Exercise, Pelvic Rocking dan Stimulation Nipple terhadap Percepatan Persalinan. *Jurnal Ilmiah Permas: Jurnal Ilmiah STIKES Kendal*, *11*(1), 179–188.

Mujahidah, S. (2020). *Penerapan Accupressuree Pada Titik Meridian SP 6 Dan BL 67*

e-ISSN 3089-8943
p-ISSN 3089-896X

Terhadap Lama Persalinan Kala I. *2*(1), 37–46.

Mujahidah, S., & Sari, N. (2020). Penerapan Accupressuree Pada Titik Meridian Sp 6 Dan Bl 67 Terhadap Lama Persalinan Kala I. *JMPH (Journal of Midwifery and Public Health)*, *2*(1).

Munafiah, D., Rahayu, H., Mujahidah, S., Mustika Dewi, M., & Nuringtyas Rahayu, D. (2022). Manfaat Kompres Dingin Pada Nyeri Perineum Kala IV. *Indonesian Health Issue*, *1*(1), 26–33. https://doi.org/10.47134/inhis.v1i1.7

Nurpratiwi, Y., Hadi, M., & Idriani, I. (2020). Teknik Rebozo terhadap Intensitas Nyeri Kala I Fase Aktif dan Lamanya Persalinan pada Ibu Multigravida. *Jurnal Keperawatan Silampari*, *4*(1), 293–304.

Permatasari, R. D., & Setyaningsih, F. Y. (2021). " Efektifitas Pelvic Rocking Exercise Dengan Peanut Ball Terhadap Percepatan Kala I Fase Aktif Persalinan. 12 (2), 441–448.

Rajput, V., & Jaiswal, I. (2021). Effectiveness of planned teaching programme on nonpharmacological measure (rocking chair) for progress of 1st stage of labor in primigravida women among b.sc. nursing students. *International Journal of Advances in Nursing Management*, *9*(1), 78–83. https://doi.org/10.5958/2454-2652.2021.00020.2

Sulistiyowati, D., Mayangsari, D., Mujahidah, S., & Afriani, A. I. (2024). the Benefits of Rebozo Technique and Spleen 6 Acupressure on the Duration of Labor in Multiparous Mothers. *Jurnal Smart Kebidanan*, *11*(1), 43–50. https://doi.org/10.34310/gxskq489

Surtiningsih, S., Susiloretni, K. A., & Wahyuni, S. (2016). Efektifitas Pelvic Rocking Exercises terhadap Lama Waktu Persalinan pada Ibu Primipara di Puskesmas Wilayah Kabupaten Banjarnegara. *Jurnal Keperawatan Soedirman*, *11*(2), 117. https://doi.org/10.20884/1.jks.2016.11.2.660

Wati, L., Monarisa, M., & Hamdanesti, R. (2022). Pengaruh Metode Birth Ball Terhadap Intensitas Nyeri Persalinan Kala I Fase Aktif di Praktek Mandiri Bidan (PMB) Fifi Maryoni. *Jurnal Ilmiah Universitas Batanghari Jambi*, *22*(1), 89–91.

Yuriatia, P., & Khoiriyah, E. (2021). Persalinan Nyaman Dengan Teknik Rebozo. *Jurnal Ilmu Keperawatan Dan Kebidanan*, *12*(2), 287–291.