



**THE POTENTIAL OF MOXIBUSTION AND REBOZO TECHNIQUE AS AN
ALTERNATIVE SOLUTION FOR PREGNANT WOMEN WITH BREECH
PRESENTATION**

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ABSTRACT

Breech presentation is a common malpresentation in pregnancy, associated with increased perinatal mortality and maternal morbidity. Conventional management such as cesarean section (CS) or vaginal breech delivery may cause trauma and risks for both mother and baby. Therefore, non-invasive complementary approaches, including moxibustion (Chinese traditional therapy) and rebozo (Mexican traditional technique), are being explored as safer alternatives. This study analyzed the potential of moxibustion and the rebozo technique in correcting breech presentation. A quasi-experimental design with a post-test only nonequivalent control group was used. Sixty pregnant women (28–36 weeks gestation) with breech presentation, participants were divided into intervention and control groups using purposive sampling. The intervention group received moxibustion at BL67 and rebozo for 10 consecutive days (10 minutes/day), while the control group performed knee-chest therapy with the same duration and frequency. Data on fetal position were collected through observation and analyzed using the Mann-Whitney test. Significant differences were found between groups ($U = 0.00$; $Z = -6.145$; $p = 0.000$), with the intervention group showing a higher rate of conversion from breech to cephalic presentation. Moxibustion and rebozo techniques are effective non-invasive alternatives for breech correction and may be integrated into antenatal midwifery education and care programs.

Keywords: breech presentation; moxibustion; pregnant women; rebozo technique

How to cite (in APA style)

Tono, S. F. N., Primiastuti, D., & Aprilia, D. (2025). The Potential of Moxibustion and Rebozo Technique as An Alternative Solution for Pregnant Women with Breech Presentation. *Indonesian Journal of Global Health Research*, 7(6), 335–340. <https://doi.org/10.37287/ijghr.v7i6.398>.

INTRODUCTION

Breech presentation is one of the most common malpresentations in pregnant women, known as a pathological condition associated with the risk of infant mortality and maternal morbidity (Ilhamjaya & Tawali, 2020b; Lingkungan, 2025). The majority of pregnant women, around 3–4%, experience breech presentation from the beginning of pregnancy, which persists until the end of pregnancy and may even continue into labor (Aurelia et al., 2024).

The World Health Organization (WHO) reports that 358,000 mothers die each year, and 4–4.5% of these deaths are due to breech delivery (Andarwulan, 2025). The prevalence of perinatal mortality in breech pregnancies in Indonesia is approximately 16.8–38.5%, which is 13 times higher compared to perinatal deaths in cephalic presentation. Meanwhile, perinatal morbidity is 5–7 times higher than in cephalic presentation (Aritonang, 2024; Yulianita & Rosyidah, 2025). Based on an initial survey conducted in February 2025 involving 10 pregnant women in the second and third trimesters, it was found that 8 were breech pregnancies, while only 2 presented in cephalic position. Delivery in breech presentation does not follow the mechanism of molding and requires faster management immediately after the body is born. Therefore, the infant mortality rate in breech deliveries is higher than in cephalic presentation, as the umbilical cord becomes compressed between the head and pelvis when the head enters the pelvic cavity. The uterus is also pulled, which can cause placental abruption before delivery, leading to a lack of oxygen supply for the fetus

(Public et al., 2024). In addition, infant morbidity increases due to complications such as fractures of the humerus and clavicle during arm delivery, paralysis caused by compression or traction of the brachial plexus, and asphyxia (Sarsmaz et al., 2022). Maternal morbidity, on the other hand, is mainly due to postpartum hemorrhage or birth canal trauma, whether through spontaneous vaginal breech delivery or cesarean section (C-section), as well as infection (Andarwulan, 2025; Aurelia et al., 2024; Fahnawal & Yunita, 2022; Ilhamjaya & Tawali, 2020a; Mistrina & Lestari, 2024). This is supported by research conducted by Ilhamjaya Andi and Tawali Suryani (2020), which found that pregnant women with breech presentation had more risk factors, resulting in persistently high maternal and perinatal morbidity and mortality rates (Ilhamjaya & Tawali, 2020b). Various efforts can be taken, including medical interventions such as C-section or vaginal breech delivery, but these may result in trauma for both mother and baby. Therefore, non-medical approaches are necessary, namely complementary therapies combining Traditional Chinese therapy (moxibustion) and Traditional Mexican therapy (rebozo), as alternative solutions for pregnant women with breech presentation. These methods are simple, safe to apply until delivery, and aim to ensure that both mother and baby are delivered safely and in good health.

METHOD

This study employed a quasi-experimental design (post-test only nonequivalent control group) (Hikmawati, 2020; Sahir, 2021). The research sample consisted of pregnant women at 28–36 weeks of gestation with breech presentation, selected using a purposive sampling technique, with a total of 60 respondents divided into two groups: control and intervention. The study was conducted over a period of three months. The data collection instrument was an observation sheet containing the examination results. The intervention group received moxibustion and rebozo techniques for 10 consecutive days, with each session lasting 10 minutes. Meanwhile, the control group was given only conventional therapy, namely the knee-chest position, with the same frequency and duration. All data were tabulated and analyzed using descriptive statistics to describe respondent characteristics and fetal position changes. Normality was tested with the Shapiro-Wilk test, and because the data were not normally distributed, group differences were analyzed using the Mann-Whitney U test with a significance level of $p < 0.05$.

RESULT

Table 1.
The Maternal Age in the Intervention and Control Groups

		Groups				Total	
		Intervention		Control			
		f	%	f	%	f	%
Age Range (Years)	< 20 years	8	26,7	4	13,3	12	20
	20-35 years	10	33,3	14	46,7	24	40
	>35 years	12	40	12	40	24	40

Based on table 1, the frequency distribution of maternal age in both the intervention and control groups indicates that nearly half of the respondents were above 35 years old. This finding suggests that a relatively large proportion of pregnant women with breech presentation in this study were of advanced maternal age, which is commonly associated with an increased risk of obstetric complications.

Table 2.
The Gravida of Pregnant Women in the Intervention and Control Groups

		Groups				Total	
		Intervention		Control			
		f	%	f	%	f	%
Gravida (Pregnancy order)	Primigravida	8	26,7	4	13,3	12	20
	Multigravida	16	53,3	17	56,7	33	55
	Grande	6	20	9	30	15	25

Based on table 2, the distribution of maternal characteristics according to gravida in both the intervention and control groups indicates that the majority of participants were multigravida, suggesting that most of the women had experienced more than one pregnancy.

Table 3.
The History of Breech Presentation in Pregnant Women in the Intervention and Control Groups

		Groups				Total	
		Intervention		Control		Frequency	%
		Frequency	%	Frequency	%		
History of Breech Presentation	Ever	14	46,7	15	50,0	29	48,3
	Never	16	53,3	15	50,0	31	51,7

Based on table 3, the frequency distribution of maternal characteristics regarding breech presentation history reveals that most women in the intervention group had no prior experience of breech presentation, while in the control group, approximately half of the participants likewise reported no history of breech presentation.

Table 4.
The Gestational Age in the Intervention and Control Groups

		Groups				Total	
		Intervention		Control		f	%
		f	%	f	%		
Gestational Age	28-30 weeks	2	6,7	2	6,7	4	6,7
	31-33 weeks	12	40,0	13	43,3	25	41,6
	34-36 weeks	16	53,3	15	50,0	31	51,7

Based on table 4, the distribution of maternal characteristics by gestational age indicates that, in both the intervention and control groups, the majority of participants were in the 34–36 weeks gestational range.

Table 5.
Distribution of Fetal Position Changes Between the Intervention and Control Groups

Groups	H1						H10					
	Breech	%	Cephalic	%	Total	%	Breech	%	Cephalic	%	Total	%
Intervention	30	100	0	0	30	100	3	10	27	90	30	90
Control	30	100	0	0	30	100	29	97,0	1	3,3	30	97,0
Total	60	100	0	0	30	100	32	53,3	28	46,7	60	53,3

Based on table 5, at baseline (H1), all respondents in both the intervention and control groups were in breech presentation (100%), confirming the homogeneity of initial conditions. Following the intervention (H10), a notable divergence was observed. In the intervention group, 90% of participants (n = 27) converted to cephalic presentation, while only 10% (n = 3) remained breech. In contrast, in the control group, 96.7% (n = 29) persisted in breech presentation, with only 3.3% (n = 1) converting to cephalic. Overall, of the 60 respondents, 53.3% (n = 32) remained breech, whereas 46.7% (n = 28) achieved cephalic presentation. These results demonstrate that the majority of fetal position changes occurred within the intervention group.

Table 6.
Analysis of Differences in Fetal Presentation between the Intervention and Control Groups

Variable	N	Fetal Position					P value
		Mean±SD	Min-Max	U	Z		
Moxa&Rebozo	30	1,90±0,30	2±2				
Control	30	1,03±0,18	1±1	0,00	6,145		0,000
Delta (Δ)		0,87					

Mann-Whitney Test

Based on table 6, the results of the statistical analysis indicate a significant difference in fetal position changes between the intervention (Moxibustion & Rebozo) and control groups. The intervention group showed a higher mean score (1.90 ± 0.30) compared to the control group (1.03 ±

0.18), with a delta (Δ) value of 0.87. The Mann-Whitney U test yielded $U = 0.00$, $Z = 6.145$, and a p-value of 0.000 ($p < 0.05$), suggesting that the intervention had a statistically significant effect on fetal position changes, with a greater proportion of fetuses successfully turning to the cephalic position in the intervention group compared to the control group.

DISCUSSION

The results of this study demonstrated a significant difference between the intervention group, which received moxibustion and the rebozo technique, and the control group. In the intervention group, the majority of fetuses successfully changed to the cephalic position, while in the control group most remained in the breech position. This confirms that the intervention played an important role in facilitating fetal position changes, rather than being influenced merely by chance or the respondents' baseline characteristics. The distribution of respondent characteristics indicated that the majority were within the productive age range (20–35 years), a substantial proportion were multigravida, and the proportion between those with and without a history of breech presentation was relatively balanced. In addition, most pregnant women were at a gestational age of 34–36 weeks, the period when the fetus typically begins to establish its position (Misrina & Lestari, 2024). The comparability of characteristics between the intervention and control groups suggests that the study outcomes were not confounded by baseline differences. Thus, the observed effects are more plausibly attributed to the moxibustion and rebozo interventions.

These findings are consistent with recent national studies reporting that maternal age below 20 years or above 35 years is associated with an increased risk of breech presentation (Yulianita & Rosyidah, 2025). However, since the age distribution in this study was relatively balanced, age did not emerge as a major distinguishing factor. Similarly, parity has been reported as a factor influencing uterine elasticity and fetal positioning (Aliffian, 2022). Yet, the parity homogeneity across both groups in this study ensured that it did not significantly affect the outcomes. Therefore, the success of fetal version is more strongly linked to the administered interventions (Astuti et al., 2023).

Physiologically, moxibustion works by stimulating the BL-67 (Zhiyin) acupuncture point located on the small toe (Andarwulan, 2025). The heat stimulation from moxa enhances qi and blood circulation, which subsequently induces mild uterine contractions. These contractions encourage fetal movement, thereby increasing the likelihood of spontaneous version to the cephalic position (Afrilia & Suksesty, 2023; *Moxibustion: An Alternative Option for Breech Presentation*, 2018; Tauhid & Purnamasari, 2022). This mechanism is further supported by traditional acupuncture theory, which posits that stimulation of specific points helps balance body energy and optimize reproductive function (Sarsmaz et al., 2022).

Meanwhile, the rebozo technique works through biomechanical principles. Gentle movements with a long scarf relax the pelvic muscles and uterine ligaments, creating a wider intrauterine space (Fumagalli et al., 2024). This relaxation facilitates fetal rotation to the cephalic position while also reducing maternal discomfort. García noted that the rebozo technique improves maternal comfort, reduces back pain, and supports fetal mobility, all of which contribute to successful position changes (Estrada & García, n.d.). This study's findings are in line with international research. Cardini & Weixin in China reported that moxibustion was effective in increasing fetal activity and the likelihood of spontaneous version between 32–36 weeks of gestation (Zanchin, 2021). A recent meta-analysis by Coyle et al. also concluded that moxibustion may reduce the incidence of non-cephalic presentation at birth (Coyle et al., 2023). Similarly, Vas et al. found that moxibustion improved the success rate of spontaneous version in breech fetuses (Naithani et al., 2021).

Although research on the rebozo technique is still limited, emerging reports indicate its potential benefits. Fumagalli emphasized that rebozo is a promising complementary intervention to facilitate

optimal fetal posture. Another study in Turkey reported that rebozo effectively reduced labor pain and improved maternal comfort (Tandoğan & Oskay, 2024). These findings reinforce the potential of rebozo as a complementary technique for supporting fetal position changes.

In the national context, Waslia's study demonstrated that moxibustion is effective and safe for use at 32–36 weeks of gestation to assist fetal version (Waslia, 2021). Additionally, Aritonang et al. found that the rebozo technique significantly influenced fetal descent during the active phase of labor. Both findings support the results of this study, which employed a combination of moxibustion and rebozo (Aritonang, 2024). Thus, the findings of this study strengthen the empirical evidence that moxibustion and rebozo can be considered simple, safe, and effective non-invasive interventions to address breech presentation. These interventions hold potential to be integrated into complementary midwifery care in Indonesia, particularly in efforts to reduce operative deliveries resulting from abnormal fetal positions.

CONCLUSION

This study demonstrates that the combination of moxibustion and the rebozo technique is effective in facilitating the change of fetal presentation from breech to cephalic compared with the control group. The comparability of respondent characteristics ensures that the observed outcomes were attributable to the interventions rather than chance or baseline differences. Moxibustion works by stimulating the BL-67 acupuncture point, thereby enhancing maternal energy and promoting fetal movement, while the rebozo technique helps relax pelvic muscles and creates more intrauterine space for fetal rotation. The results of this study are consistent with both national and international research, affirming the effectiveness of these interventions either individually or as complementary therapies. Therefore, moxibustion and rebozo can be considered safe, simple, and effective non-invasive approaches to address breech presentation. These interventions have the potential to be integrated into complementary midwifery practice to reduce operative delivery rates due to abnormal fetal positions.

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