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THE EFFECT OF SEMI-SITTING POSITION ON THE PROGRESS OF SECOND STAGE LABOR IN PIDIE REGENCY IN 2024

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ABSTRACT

The leading causes of maternal and infant mortality are complications during childbirth, such as hemorrhage and prolonged labor. The WHO recorded 69,000 cases of prolonged labor worldwide in 2020, contributing to 2.8% of maternal deaths globally and becoming a major cause of childbirth complications. The position during pushing is one of the determining factors for the success of labor. The semi-sitting position can provide comfort to the mother by helping her rest between contractions, shortening the birth canal, ensuring optimal oxygen supply from the mother to the baby, and utilizing gravity to assist in the baby's delivery process. Research Objective to determine the effect of the semi-sitting position on the progress of second-stage labor in mothers delivering at Jamaliah Midwifery Clinic, Pidie Regency. This research is an analytic survey with a cross-sectional approach. The population in this study consisted of all mothers delivering at Jamaliah Midwifery Clinic in November 2024, totaling 33 individuals. The research was in November *2024. The results indicated a significant effect of the semi-sitting position on the progress of labor at Jamaliah Midwifery Clinic, Pidie Regency, in 2024, with a ρ-value of 0.009. Health institutions and healthcare workers, particularly midwives, are encouraged to optimize maternal care during childbirth by facilitating*

mothers in choosing an effective labor position to ensure a safe and comfortable delivery process.

Keywords: *Semi-Sitting Position, Labor Progress*

INTRODUCTION

The 2020 Population Census data shows that the maternal mortality rate reached 189 per 100,000 live births. This figure places Indonesia in the second-highest position in ASEAN in terms of maternal mortality, significantly higher than Malaysia, Brunei Darussalam, Thailand, and Vietnam, each of which has rates below 100 per 100,000 live births. According to data from the Maternal Perinatal Death Notification (MPDN), the number of maternal deaths in 2022 reached 4,005 cases, and increased to 4,129 cases in 2023 (Kemenkes RI, 2023).

The main causes of maternal and neonatal deaths are childbirth complications, such as hemorrhage and prolonged labor (WHO, 2019). In Indonesia, the leading causes of maternal and neonatal deaths include hemorrhage, pregnancy-related hypertension (eclampsia), prolonged labor, abortion complications, and infections (Ministry of Health of the Republic of Indonesia, 2017). Prolonged labor has serious impacts on both mothers and babies and is a global issue that needs to be addressed. The World Health Organization (WHO) reported 69,000 cases of prolonged labor worldwide in 2020, which accounted for 2.8% of global maternal deaths and became a major cause of childbirth complications. Data from the Ministry of Health of the Republic of Indonesia in 2022 shows that prolonged labor rates are the highest in Southeast Asia (Kemenkes RI, 2022).

Childbirth is a natural process but is vulnerable to complications that can increase morbidity and mortality for both the mother and the newborn (Barakat et al., 2018). During labor, the position while pushing is one of the key factors determining the success of delivery. The choice of pushing position must consider the comfort and safety of the mother, as well as her ability to support the smooth progression of labor. If a certain position is deemed to facilitate the labor process, it can be adopted (Darwis & Ristica, 2022).

Research shows that mothers who choose their preferred delivery position during childbirth can benefit in many ways, including reduced pain and discomfort, a shorter second stage of labor, and a lower risk of perineal rupture. This position also aids in the pushing process and results in better Apgar scores (Saifuddin, 2016).

The progress of labor depends on the interaction of three variables: the power, the birth canal, and the fetus. Research also shows that the mother's

position can help accelerate the progress of labor (Bonny, 2018). There are various techniques for positioning during the second stage of labor, such as sitting, squatting, kneeling, lying on the side, lying on the back, and lithotomy (Huang et al., 2019).

One position commonly used during labor is the semi-sitting position, where the mother's back rests on a pillow, her legs are bent, and her thighs are opened to the sides. This position provides comfort for the mother, allows her to rest between contractions, shortens the birth canal, maintains optimal oxygen supply from the mother to the fetus, and utilizes gravity to assist in the birth of the baby (Salam, 2018). A study by Lia Maria (2017), titled "The Effect of the Semi-Sitting Position on the Progress of the Second Stage of Labor at BPS Suparini in 2017," showed that the semi-sitting position could speed up the second stage of labor, with an average duration of 59.8 minutes for primiparas and 34.28 minutes for multiparas (Maria, 2017).

An initial survey conducted by the researcher in June 2024 at PMB Jamaliah on 5 women in labor found that 2 primigravid women in the semi-sitting pushing position had a second stage duration of 75 minutes, 1 multigravid woman in the semi-sitting position had a second stage duration of 45 minutes, and 2 multigravid women in other pushing positions had second stage durations of 35 minutes and 73 minutes, respectively.

Based on this background, the researcher is interested in conducting a study on the effect of the semi-sitting position on the progress of the second stage of labor in women giving birth at PMB Jamaliah, Pidie Regency, in 2024.

METHODS

This study is an analytical survey with a cross-sectional approach. The population of this study consists of all women giving birth at PMB Jamaliah in November 2024, totaling 33 individuals. The research was conducted in November 2024.

Data analysis was performed using bivariate analysis with the chi-square test

RESULTS AND DISCUSSION

Result of the research

A. **Univariate Analysis**

1. Frequency Distribution Semi-Sitting Delivery Position And Labor Progress

Frequency Distribution Semi-Sitting Delivery Position And Labor Progress of Labor

		f	%
1	Semi-Sitting Delivery Position		
	Yes	20	60.6
	No	13	39.4
2	Labor Progress		
	Progressed	22	66.7
	Not Progressed	11	33.3

Based on the table above, in terms of the delivery position, the majority of respondents were in the semi-sitting position, with 20 individuals (60.6%), while the minority were in other positions, totaling 13 individuals (39.4%). In terms of labor progression, the majority of respondents had progressed labor, with 22 individuals (66.7%), while the minority had stagnant labor, with 11 individuals (33.3%).

B. Bivariate Analysis

The Effect of the Semi-Sitting Position on the Progress of the Second Stage of Labor in Women Giving Birth

The Effect of the Semi-Sitting Position on the Progress of the Second Stage of Labor

No	Semi-Sitting Delivery Position	Labor Progress				Total		ρ Value
		Progressed		Not Progressed				
		f	%	*f*	%	*f*	%	
1	Yes	17	85.0	3	15.0	20	60.6	0,009
2	No	5	38.5	8	61.5	13	39.4	
	Total	22	66.7	11	33.3	33	100.0	

Based on the data from the table above, it can be seen that out of 20 respondents in the semi-sitting delivery position, the majority experienced progress in labor, with 17 individuals (77.3%), while out of 13 respondents in other delivery positions, the majority had no progress in labor, with 8 individuals (61.5%). According to the Chi-Square statistical test at a 95% confidence level, a ρ Value of 0.009 was obtained ($\rho < 0.05$). This indicates that, statistically, there is an effect of the semi-sitting position on the progress of labor at PMB Jamaliah, Pidie Regency.

C. Discussion

The Effect of the Semi-Sitting Position on the Progress of the Second Stage of Labor in Women Giving Birth

In the labor process, the positioning of the mother plays an important role in facilitating the delivery. Various techniques have been developed for women in the second stage of labor, aimed at shortening the duration of labor and minimizing potential complications for both the mother and the fetus. During labor, it is not uncommon for the birth attendant to ask the mother to change positions to facilitate the process. The second stage of labor is the most critical phase for the fetus and plays a significant role in determining the success of delivery. Therefore, clear instructions should be given to the mother, such as the proper technique and timing for pushing, as well as the selection of an appropriate delivery position. The right delivery position can help reduce pain during labor and accelerate the smooth progress of delivery (Triananinsi, 2023).

The position used during labor is expected to reduce pain during the delivery process and expedite the progress of labor. This position must also be safe, provide comfort, and ensure the safety of the mother. In addition, the chosen position should make the mother feel safe, comfortable, and emotionally calm (Syafaruddin, 2016).

Several techniques developed for women in the second stage of labor aim to shorten the duration of labor and minimize complications for both the mother and the fetus. One of these techniques is the McRoberts position, also known as the semi-sitting position. The McRoberts position can be applied during the second stage of labor, where the mother lies in a semi-recumbent position or flat on her back (with a pillow under her head). The mother's legs are rotated outward (abduction), and her knees are drawn toward her chest, either by the mother herself or with assistance from another person, each pulling one leg. The advantage of the McRoberts position is that the birth canal becomes shorter, allowing the baby’s head to move into the optimal position, rotate, and descend more quickly during the second stage of labor.

The semi-sitting position is one where the mother sits with her body forming a 45-degree angle with the bed. This position helps avoid compression of the inferior vena cava, thus accelerating the descent of the baby’s head due to the shorter distance of the birth canal. As a result, oxygen supply is also improved. The semi-sitting position provides comfort for the laboring mother and is easy to implement. Additionally, this position can improve fetal oxygenation, expand the dimensions of the pelvic inlet, reduce pain, facilitate pushing, and decrease the risk of trauma to the vagina and perineum. The semi-sitting position also aids the descent of the baby's head by utilizing gravity to

move the fetus into the pelvis and further toward the pelvic floor (Nurdiyan, 2019).

The results of the study show that among respondents in the semi-sitting delivery position, the majority experienced progress in labor, with 17 individuals (77.3%), while among respondents in other delivery positions, the majority had no progress in labor, with 8 individuals (61.5%). A ρ Value of 0.009 ($\rho < 0.05$) was obtained, indicating that, statistically, there is an effect of the semi-sitting position on the progress of labor at PMB Jamaliah, Pidie Regency, in 2024. These findings are in line with the research conducted by Trianinsi (2023), where the Chi-Square test resulted in a ρ value of 0.023, which means $\rho < \alpha$ (0.05), suggesting that the McRoberts delivery position influences the duration of the second stage of labor in primiparous women.

The researcher assumes that the mother's position during labor affects the duration of labor, as evidenced by the results where mothers in the semi-sitting position mostly experienced progress in labor. However, this study also found some mothers in the semi-sitting position with prolonged labor. This could be due to other factors influencing the labor process, such as inadequate contractions, improper pushing techniques, and the psychological state of the mother.

CONCLUSION

There is an effect of the semi-sitting position on the progress of labor at PMB Jamaliah, Pidie Regency, in 2024, with a ρ value of 0.009. For healthcare institutions and healthcare providers, particularly midwives, it is important to optimize the provision of maternal care during labor by facilitating the mother's choice of an effective delivery position. This aims to ensure that the labor process can proceed safely and comfortably

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REFERENCES

Kementerian Kesehatan RI, 2023. *Angka Kematian Ibu.* https://sehatnegeriku.kemkes.go.id/baca/blog/20240125/3944849/agar-ibu-dan-bayi-selamat/

Kemenkes RI. (2017). *Survei Demografi Kesehatan Indonesia Tahun 2017*. Jakarta: Kementerian Kesehatan RI

WHO. 2019. "*Maternal Mortality Evidence Brief Progress towards Achieving the Sustainable Development Goals* "https://apps.who.int/iris/bitstream/handle/10665/329886/WHO-RHR-19.20-eng.pdf.

Barakat, R. et al. (2018) '*Exercise during pregnancy is associated with a shorter duration of labor. A randomized clinical trial*', European Journal of Obstetrics Gynecology and Reproductive Biology. Elsevier Ireland Ltd, 224, pp. 33–40. doi: 10.1016/j.ejogrb.2018.03.009.

Darwis, D., & Octa Dwienda Ristica. (2022). Asuhan Kebidanan Pada Ibu Bersalin Dengan Posisi Miring Untuk Memperlancar Proses Kala II Di PMB Hj. Murtinawita, Se Kota Pekanbaru Tahun 2021. Jurnal Kebidanan Terkini (Current Midwifery Journal), 2(1), 64–68. https://doi.org/10.25311/jkt/vol2.iss1.581. Diakses pada tanggal 2 Januari 2022.

Huang, J., Zang, Y., Ren, L. H., Li, F. J., & Lu, H. (2019). *A review and comparison of common maternal positions during the second-stage of labor.* In International Journal of Nursing Sciences (Vol. 6, Issue 4, pp. 460–467). Chinese Nursing Association.

Salam,2018. *Kehamilan, persalinan, dan nifas*. Yogyakarta : Nuha Medika.

Triananinsi dkk, 2023. *Pengaruh Posisi Persalinan Mc.Robert Terhadap Lama Persalinan Kala II Pada Ibu Primipara*. Jurnal Ilmiah Kesehatan Diagnosis Volume 18 Nomor 1 Tahun 2023.

Syafrudin. (2015). *Asuhan kebidanan persalinan*. Jakarta : kedokteran EGC

Nurdiyan A. *Efektifitas Posisi Miring Kiri Dengan Posisi Setengah Duduk Terhadap Lama Persalinan Kala II*. Jurnal Kesehatan. 2019;10(2):53–7