

The husband as a labor companion has a good influence on the duration of labor

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ABSTRACT

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Birth support can prevent prolonged labor. The husband can carry out this support as a delivery companion. This study aims to assess the effect of the husband's role as a labor companion on the duration of labor. This research is an observational analytic study with a cross-sectional design. The samples in this study were 60 pairs of mothers and their husbands who met the inclusion and exclusion criteria. Data were obtained using the observation sheet on the husband's role and partograph. The analysis used in this study was the chi-square test and logistic regression. Mothers in labor will have an increased risk of 2.85 to experience a prolonged first stage of labor if the husband does not provide sufficient support as a birth companion during labor (OR=2.8, 95% CI=1.52-5.16). Good labor companion by the husband will be able to prevent mothers from experiencing a long second stage of labor (OR = 0.34, 95% CI = 0.18-0.62). The role of a good husband as a birth companion is to maintain the expected time for the first and second stages of labor and prevent the long duration of labor.

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1. Introduction

Physiological labor is closely related to positive outcomes for both mother and baby. These include avoidance of the possibility of cesarean section, instrumental labor, and success in creating bonding between mother and baby (Neerland, 2018). This physiological labor is also associated with increased initiation of early breastfeeding and benefits the physical and mental health of the mother (Er et al., 2016).

During the birth process, the mother needs physical and psychological support for the success of the delivery process. Women need various kinds of support during labor (Kashanian et al., 2015). This labor support has been shown to improve birth outcomes, provide psychological benefits for the mother, and affect the newborn's health (Fitriasnani et al., 2022a). Psychological support is an essential part of labor, as the mother's psychological state can significantly influence the process and outcome of childbirth (Morhason-Bello et al., 2019).

Several forms of psychological support can be provided during labor to mothers, including childbirth companion (Brown et al., 2017; Kabakian-Khasholian et al., 2015). It has been demonstrated in several previous studies that companionship provided by those closest to the mother during labor has a positive impact on maternal satisfaction. In particular, companionship provided by

those closest to the mother enhanced maternal satisfaction during labor (Wanyenze et al., 2022), reduced the number of cesarean sections and labor pains, and sped up the birthing process. Women who have an extended delivery time will experience more discomfort and pain and are at risk of poor birth outcomes (Cavazos-Rehg et al., 2015; Wang et al., 2020).

Various forms of assistance can be provided during labor by midwives, delivery companions (doulas), and the closest family or husband (Wanyenze et al., 2022). Mix method research conducted in Kenya showed that most of the delivery assistance was carried out by the closest person to the birthing mother who came from her social environment (88%). In comparison, assistance by the husband was only 29% of the total deliveries (Afulani et al., 2018). In Indonesia, the process of assisting husbands during the childbearing period has been included in the government's national program known as "suami SIAGA", literally as the "alert husband" (Kurniati, Chen, Efendi, Elizabeth, et al., 2017). Research on the evaluation of the implementation of the "Suami SIAGA" program was conducted on 1256 men. According to this research, 50% of men could not fulfill their "Suami SIAGA" role due to a lack of knowledge, education, or poverty. The husband's presence at (Kurniati, Chen, Efendi, Elizabeth Ku, et al., 2017) delivery is recognized as an effective way to enhance positive experiences for women in all aspects of childbirth (Muhwava et al., 2020).

There is limited research on the benefits of accompanying husbands during childbirth in Indonesia. A limited amount of research has been conducted on the impact of satisfaction during labor and reduced anxiety levels (Fitriasnani et al., 2022b; Marcelina et al., 2019). This research is essential as educational material for husbands to be able to carry out their duties during childbearing. Childbearing is a collaborative process between the woman and her partner (Nyström & Öhrling, 2019). For this reason, this study aims to assess the effect of the husband's role as a labor companion on the duration of labor.

2. Methods

2.1 Study setting and population

This research was a quantitative observational study with a cross-sectional approach. This study wanted to assess the effect of the husband's role as a birth companion on the duration of labor. This research was conducted by 60 pairs of mothers and their husbands at the study site. Calculation of the number of samples was carried out using sample calculations for cross-sectional research (Charan & Biswas, 2013). Sample selection was done by purposive sampling and met the inclusion and exclusion criteria. The inclusion criteria of this study are full-term pregnant women, no labor complications, a single fetus, the birth process is carried out spontaneously vaginally without medical intervention, and the husband is willing to accompany the birth process from the first stage to the end of the second stage. While the exclusion criteria are mothers with excessive anxiety assessed by the Hamilton Anxiety Rating (score > 17) (Ruqaiyah et al., 2020), mother and fetus with delivery complications, mothers with a history of previous anxiety disorders and psychiatric disorders, mothers who are unaccompanied during labor or non-husband companions.

2.2 Research variables and data collection techniques

In this study, an assessment was carried out regarding the husband's role as a birth companion during labor. A questionnaire or observation sheet assessed the husband's role as an independent variable. The author developed a questionnaire. This questionnaire is an observation sheet helpful in assessing the husband's attitude and behavior while accompanying pregnant women in the first to second stages of labor. This observation sheet has been tested for validity and reliability and is declared valid and reliable to be used as a measuring tool in this study (Taherdoost, 2016). The husband's role is categorized as less and good. The role of a good husband is assessed by an observation sheet using indicators of providing emotional, physical, and psychological support, as well as impacting the mother's comfort during childbirth (questionnaire score \geq mean). While the husband's role is not good, it is assessed from the observation score with the same indicator of support, with a score of < mean.

The dependent variable in this study was the length of labor from the first to the second stage. The length of labor was assessed using a partograph starting from the time the mother entered the first active phase (cervical dilatation of at least 4 cm). The length of the first stage is assessed from the opening of the cervix 4 cm to 10 cm. It is categorized as abnormal (passing the alert line in partograph) and normal (not crossing the alert line in partograph). The length of the second stage of labor is defined as the time when the fetus is born from complete dilatation to the birth of a complete baby. The second

stage is categorized as abnormal (primigravida > 2 hours, multigravida > 1 hour) and normal ((primigravida ≤ 2 hours, multigravida ≤ 1 hour).

Respondent characteristic data were also collected to provide an overview of the characteristics of the sample used in this study. The characteristics of the respondent are the husband's age (<20 years, 20-35 years, >35 years), wife's age (<20 years, 20-35 years, >35 years), parity (0, 1, >1), husband's education (elementary school, middle school, high school, university), and wife's education (elementary school, middle school, high school, university).

The data collection process was carried out by midwives who worked at research sites and were not assisting the delivery process. These midwives had previously been trained to observe the husband's role while accompanying mothers in the first and second stages in the delivery room and to assess the length of the first and second stages by reading the results of the partograph.

2.3 Statistical Analyses

The skewness test was carried out to test the normality of the data, whether customarily distributed or not, and to determine the limit of the husband's assistance score with the mean value.

A non-parametric test with paired categorical comparative hypotheses was performed using the Chi-square test to assess the association between the husband's role during accompaniment and the duration of the first and second stages of labor. P value < 0.005 indicates a significant result. The association between the husband's role during accompaniment and the duration of the first and second stages was also assessed for odds ratio (OR) with a 95% confidence interval (95% CI) using multivariable logistic regression analysis. Processed data analysis was carried out using SPSS 21 (IBM® SPSS® Statistics 21).

3. Results/Findings

Based on table 1, it was found that most husbands were in the range of 20-35 years (63.3%), wives were in the range of 20-35 years (78.3%), and had parity 0 (38.3%). Most husbands and wives had a high school education, 53.3% for husbands and 53.3% for wives. Most husbands played a good role in the delivery companion process (65%). Most of the duration of the first stage of labor was normal (not crossing the alert line on the partograph); namely 73.3%, and the majority experienced a prolonged second stage of labor which was also normal (75%).

Table 1. Respondent Characteristics

No	Characteristics	N (60)	Percentage (%)
1	Husband's age		
	< 20	8	13.3
	20-35	41	68.3
2	Wife's age		
	< 20	6	10.0
	20-35	41	78.3
3	Parity		
	0	23	38.3
	1	19	31.7
4	Husband education		
	Elementary school	5	8.3
	Middle school	11	18.3
	High school	32	53.3
5	Wife education		
	Elementary school	4	6.7
	Middle school	10	16.7
	High school	32	53.3
6	Husband's role as birth partner		
	Good	39	65
7	The duration of the first stage of labor		
	Normal	44	73.3
8	The duration of the second stage of labor		
	Normal	45	75

Based on [table 2](#), it was found that mothers in labor would be at risk of experiencing prolonged first stage 2.85 times (exceeding the alert line on the partograph) if the husband did not provide sufficient support as a birth attendant during labor, with OR (95% CI) = 2.85 (1.52-5.16). Moreover, vice versa, if the husband provides good support as a childbirth companion during the birth process, this will be able to protect about 71% of mothers from the possibility of the prolonged first stage of labor, OR (95% CI) = 0.29 (0.14-0.57).

Table 2. The influence of the husband's role as a birth companion on the duration of the first stage of labor

The duration of first stage of labor	Husband's role as birth companion						P value**
	Less (n=21)			Good (n=39)			
	n	%	OR (95%CI)*	n	%	OR (95% CI)*	
Abnormal	15	71.4	2.85 (1.52-5.16)	1	2.5	0.29 (0.14-0.57)	< 0.001
Normal	6	28.6	1.00	38	97.5	1.00	

* Adjusted odd ratio for husband's age, wife's age, parity, husband education, and wife education

** Chi-square test

Based on [table 3](#), it was found that birthing mothers with husbands who do not provide sufficient support as a birth companion during the labor process will have 2.60 times increased risk of experiencing a prolonged second stage of labor with OR (95% CI) = 2.60 (1.36-4.37), and vice versa if the husband provides support properly during labor, it will be able to protect 66% of the possibility of prolonged second stage labor, with OR (95% CI) = 0.34 (0.18-0.62).

Table 3. The influence of the husband's role as a birth companion on the duration of the second stage of labor

The duration of second stage of labor	Husband's role as birth companion						P value**
	Less (n=21)			Good (n=39)			
	n	%	OR (95%CI)*	n	%	OR (95%CI)*	
Abnormal	14	66.7	2.60 (1.36-4.37)	1	2.5	0.34 (0.18-0.62)	< 0.001
Normal	7	33.3	1.00	38	97.5	1.00	

* Adjusted odd ratio for husband's age, wife's age, parity, husband's education, and wife's education

** Chi-square test; P value < 0.005 was considered as significant correlation

4. Discussion

This study found that the husband's role as a birth companion had a good impact on preventing the occurrence of the first stage of prolonged labor. It is proven that a good husband's role in childbirth companion will be able to prevent the occurrence of a long first stage (exceeding the alert line on the partograph). A good husband's companion can provide 2.85 times the protection from the possibility of an abnormally long duration of the first stage of labor. This study follows RCT studies in Iran on 50 mothers who were given continuous birth assistance by partners, stating that continuous support and assistance could speed up the time of the first stage by fewer than 100 minutes (p-value < 0.001) ([Zahra, 2013](#)). This husband's assistance has a positive impact. It makes the mother feel comfortable and avoids excessive fear during labor ([Fitriasnani et al., 2022b](#)). The presence of the husband during the birth process is proven to be able to reduce damaging trauma about childbirth and be able to prevent lousy birth outcomes. One of them is preventing prolonged labor in the first stage ([Kianpour et al., 2016](#); [Morhason-Bello et al., 2019](#)).

The current research also found that a good husband's companion during the delivery process prevented around 66% of the long second stage (primigravida > 2 hours, multigravida > 1 hour). This study follows an RCT study in Iran in which 50 pregnant women with continuous assistance were able to experience the second stage of labor in less than 30 minutes ([Kungwimba et al., 2013](#); [Wang et al., 2018](#)). Another RCT study in Nigeria on 585 pregnant women who were about to give birth found that pregnant women whom their husbands did not accompany had a longer time in the first active phase than those who were not accompanied and had labor times that were also longer than usual (p-value < 0.001) ([Neerland, 2018](#)).

Psychologically the wife needs her husband's assistance during the birth process. This is because childbirth is the most difficult period for mothers, where mothers need support from various parties, especially husbands who can accompany their wives during the birth process until they give birth safely and comfortably (A. A. P. A. W. Astuti & Dwi, 2022; A. W. Astuti et al., 2019). The attention that a mother gets during labor will continue to be remembered by the mother, especially for those who give birth for the first time and can be a capital for smooth delivery and make the mother feel safe and not afraid of childbirth. This support is in the form of encouraging the wife during the labor process, calming the wife when the pain of contractions is present, and providing encouragement to push during contractions (Afulani et al., 2018).

Husband's support during labor is physical and psychological support provided by husbands to mothers in labor when they are facing labor. Labor is a stressful time, and it can be emotionally uplifting for the mother and family or it can even be a painful and frightening time for the mother. Efforts to deal with emotional disturbances and stressful experiences should be carried out through caring for the mother by encouraging the husband and the mother's family to attend and provide support so that the delivery can run quickly and smoothly (Zhou et al., 2020).

Assistance from the husband plays an essential role in maintaining a sense of comfort for the woman during labor. The presence of a husband can make women more confident in going through the birth process and reduce emotional stress so they can avoid the adverse effects of childbirth due to the discomfort experienced (Boelig et al., 2016). Assistance during labor by continuously providing emotional support can create a safe psychological environment for childbirth and provide a positive birth experience for the mother. The mother can control her emotions and feel mild pain during labor. This result will also have an impact on shortening labor times or avoiding long labor (Marcelina et al., 2019).

Although this research has provided evidence that a husband's assistance can maintain normal delivery times and prevent prolonged labor, some limitations must be considered. This research has yet to look more specifically at the type of husband's role during the delivery assistance process. In addition, the small sample size is also a limitation that needs to be considered for further research.

5. Conclusion

In conclusion, this study shows that a good husband's role as a delivery companion can maintain the expected time for the first and second stages of labor and prevent prolonged labor. It is essential to educate husbands about the good role of husbands in the delivery assistance process starting from the antenatal period so that husbands become more aware and better prepared to accompany their partners later when the time for labor arrives.

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