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Husband's role in the birth preparedness and complication readiness program in the Kebumen District, 2022

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Abstract

Purpose: The involvement of the husband during pregnancy helps a mother to make timely decisions to avoid delays. Identifying the level of husband involvement in birth preparedness and complication readiness (BPCR) is crucial, as the husband is the primary decision-maker in household and health service-related matters. The purpose of this study is to analyze the role of husbands in BPCR in Kebumen District in 2022. **Method:** This research employed a cross-sectional study design. Primary data was collected using questionnaires for 300 respondents, including pregnant women in the third trimester and their husbands, through cluster random sampling. The dependent variable was the role of husbands in BPCR; the independent variables were the wife's reproductive status, the husband's socioeconomic status, the husband's knowledge about pregnancy, labor, and postpartum complications, and the husband's knowledge about BPCR. The data was analyzed using univariate, bivariate analysis with binomial regression, and multivariate analysis with Poisson regression modification. **Results:** The proportion of husbands' roles in BPCR was 71.33%. Multivariate analysis indicates that husbands employed in the government or private sector are 36% (aPR 1.36; 95% CI 1.10-1.68) and 14% (aPR 1.14; 95% CI 1.02-1.28) more likely to play a supportive role in BPCR, respectively. Husbands with good knowledge about the danger signs during pregnancy, labour, and postpartum (aPR 1.23; 95% CI 1.02-1.50) and those knowledgeable about BPCR (aPR 9.83; 95% CI 4.83-19.96) have a significant positive impact on their role in BPCR. **Conclusions:** Husbands' participation in birth preparedness and complication readiness was found to be quite good. We recommend that improving the educational level is essential to increase husbands' involvement in the birth preparedness and complication readiness plan.

Keywords: BPCR; health education; husband's role; Kebumen; program

INTRODUCTION

In 2021, there were 7,389 maternal deaths in Indonesia. This number increased compared to 4,627 deaths in 2020. In 2021, the maternal mortality ratio in Kebumen Regency sharply rose to 201.6 per 100,000 live births (38 cases), ranking 8th in Central Java. In 2022, the maternal mortality ratio was 165 per 100,000 live births (29 cases), with Kebumen ranking 2nd in Central Java [1].

Birth Preparedness and Complication Readiness (BPCR) is an intervention developed by the World Health Organization (WHO) and included as a crucial element of the Antenatal Care (ANC) package. BPCR is a shared responsibility matrix that involves pregnant women/families, communities, hospital facilities/service providers, and policymakers, aimed at planning for normal labor and anticipating necessary actions in emergencies [2]. In the culture of communities in Central Java, where a patriarchal culture is still prevalent, the husband is the head of the family and has the right to make decisions. This includes decisions on the number of children to have, where the mother will give birth, who will assist with the delivery, and the use of contraceptive methods [3].

(Thaddeus & Maine, 1994) developed a model explaining maternal mortality by identifying delays in seeking, reaching, and receiving care as key factors contributing to maternal deaths. This explanatory model is known as the Three Delays Model, which categorizes delays into three types: Phase 1 delay (Delay in recognizing danger signs and making the decision to seek care), Phase 2 delay (Delay in reaching the referral facility), Phase 3 delay (Delay in receiving adequate and appropriate treatment) [4]. Mothers who are pregnant at too young an age, too old an age, too frequently, or with too many children, abbreviated as mothers with 4T, have a higher risk of maternal mortality due to various complications they experience [5]. At the Family Level (Husband) in BPCR, it is often not the pregnant woman who decides where to give birth, but instead family members. Therefore, the initiative for Birth Preparedness and Complication Readiness must involve family members who are most likely to make decisions regarding these matters. In society, the husband is typically the most influential decision-maker [6].

The indicators of the husband's role in birth planning and complication prevention in the third edition of the integrated antenatal care service guidelines are preparing savings for the mother giving birth, choosing the place of birth, determining the birth attendant, deciding on a birth companion, organizing transportation for referral, identifying a potential blood donor in case of complications, agreeing to be referred if there are risk factors/ complications/ emergencies, identifying post-birth contraception methods [7].

Therefore, this study aimed to assess the prevalence and factors associated with male partners' involvement in birth preparedness and complication readiness in Kebumen District in 2022

METHODS

This study employed a cross-sectional design and was conducted in the Kebumen District from February 13, 2024, to April 5, 2024. The participants included 300 pregnant women in their third trimester who attended ANC at the Public Health Center (PHC) in Kebumen District between 13 February 2024 to 5 April 2024. The inclusion criteria for respondents were married pregnant women who consented and were willing to participate, their husbands who agreed to be interviewed, and pregnant women in their third trimester in Kebumen District who were receiving ANC at the PHC. Exclusion criteria were third-trimester pregnant women whose husbands were unreachable after two home visits or did not respond to two phone calls.

In this method, samples were taken from 35 PHCs that were randomly selected to represent both urban and rural areas, including 5 urban PHCs and 10 rural PHCs (5 in the hilly regions and 5 in the coastal areas). The number of third-trimester pregnant women in the selected 15 PHCs was then calculated using the probability proportionate to size (PPS) method. Primary data collection for the research was conducted through questionnaires administered during interviews with pregnant women and their husbands, carried out by trained enumerators. The dependent variable was the role of husbands in BPCR. The independent variables were the reproductive status of the wife, the socioeconomic status of the husband, the husband's knowledge about pregnancy, labor, and postpartum complications, and the husband's knowledge about BPCR.

Knowledge about the danger signs of pregnancy, labor, and postpartum was measured using a questionnaire with 24 true-or-false questions. According to Bloom's Cut Off Point, the categories are as follows: poor knowledge (score < 60%), moderate knowledge (score 60-79%), and good knowledge (score ≥ 80%) [8]. Husband's knowledge about BPCR is considered good if he can mention ≥ 6 out of 8 indicators, and his knowledge is considered poor if he mentions < 6 out of 8 indicators. Husband's role in BPCR is considered good if he implements ≥ 6 out of 8 indicators, and his role is considered poor if he implements < 6 out of 8 indicators.

The entered data were exported to STATA version 17 for analysis. Descriptive statistics, including frequency, mean, and standard deviation, were computed to describe the variables in the study. The data were analyzed using univariate, bivariable analysis with binomial regression, and multivariate analysis with

Poisson regression modification. A p-value of less than 0.05 was used to declare statistical significance.

RESULTS

Table 1 shows the socio-demographic characteristics of the respondents. Table 1 presents the sociodemographic characteristics of third-trimester pregnant respondents. The largest age group is 20-35 years old (83.33%). The most common education level is high school graduation (55.33%). Respondents living in areas with lowland geography numbered 113 (37.67%), those in hilly areas numbered 70 (23.33%), and those in coastal regions numbered 117 (39%). Most respondents' husbands are in the 17-44 years age group (95.67%). The education level of respondents includes 11.67% who completed elementary school, with occupations mainly as laborers (27.67%) and farmers (4.33%). The majority of respondents' monthly income falls below the regional minimum wage (65.33%).

Table 1. Sociodemographic characteristics of research respondents (n=300)

Variabel		Total (n)	Persentase (%)
Wife's age (years)	< 20	10	3.34
	20 - 35	241	80.33
	≥36	49	16.33
Wife's education	Elementary school	22	7.33
	Junior high school	83	27.67
	High school	166	55.33
	Bachelor degree	29	9.67
Regional topography	Lowlands	113	37.67
	Hills	70	23.33
	Coast	117	39.00
Number of parity	1<	104	34.67
	1	166	55.33
	>1	30	10.00
Spacing pregnancy (years)	< 2	141	47.00
	≥ 2	159	53.00
Complications of pregnancy	None	282	94.00
	Available	18	6.00
Wife's disease history	None	287	95.67
	Available	13	4.33
Husband's age (years)	17 – 44	287	95.67
	45-59	13	4.33
Husband's education	Elementary school	35	11.67
	Junior high school	90	30.00
	High school	155	51.67
	Bachelor degree	20	6.67
Husband's occupation	Daily laborer	83	27.66
	Farmer	13	4.33
	Self-employed	71	23.67
	Private employee	116	38.67
	Government employee	17	5.67
Husband's Monthly income	Below the minimum wage	196	65.33
	Above the minimum wage	104	34.67

Table 2. Husband's knowledge about BPCR

Variabel	Kategori	Total (n)	Persentase (%)
Knowledge about the danger signs of pregnancy, labour, and postpartum	Less	41	13.67
	Fair	100	33.33
	Good	159	53.00
Husband's knowledge about BPCR	Less	78	26.00
	Good	222	74.00
Husband's role in BPCR	Husband's role is lacking	86	28.67
	Husband's role is good	214	71.,33

Table 3. Husband's role in BPCR

Variabel	Category	Total (n)	Persentase (%)
Preparing savings for the birth mother	Yes	299	99.70
	No	1	0.30
Determining the mother's labor attendant	Yes	295	98.3
	No	5	1.70
Choosing a place for the mother to give birth	Yes	264	88.00
	No	36	12.00
Determine the mother's labor attendant	Yes	291	97.00
	No	9	3.00
Preparing transportation for the mother's delivery or referral in case of an emergency	Yes	269	89.70
	No	31	10.30
Prepare potential blood donors in case of complications	Yes	188	62.70
	No	112	37.30
Agree to refer the mother if she has risk factors/ emergencies	Yes	293	97.70
	No	7	2.30
Determine the postpartum family planning method to be used	Yes	179	59.70
	No	121	40.30
Determine the postpartum family planning method to be used	Yes	179	59.70
	No	121	40.30

Table 2 shows that husbands who have good knowledge about the dangers of pregnancy. labour. and postpartum total 159 (53%), those who have good knowledge about BPCR total 222 (74%), and those who play a good role in BPCR total 215 (71.67%). Table 3 presents the husband's role in BPCR, which remains low, including preparing blood donors (62.7%) and determining the postpartum contraceptive method to be used, as reported by 179 respondents (59.7%).

Table 4. Multivariate analysis results

Variabel	Bivariate			Multivariate		
	PR	95%CI	p-value	aPR	95%CI	p-value
Wife's age (years)						
< 20	ref	ref	ref	-	-	-
20 – 35	1.03	0.68 - 1.56	0.88	-	-	-
≥36	0.96	0.61 – 1.50	0.86	-	-	-
Number of parity						
<1	ref	ref	ref	-	-	-
1	1.12	0.95-1.32	0.16	-	-	-
>1	0.94	0.77-1.14	0.57	-	-	-
Spacing pregnancy (years)						
< 2	ref	ref	ref	-	-	-
≥ 2	1.04	0.90 – 1.21	0.51	-	-	-
Complications of Pregnancy						
None	ref	ref	ref	ref	ref	ref
Availabel	0.77	0.50 – 1.17	**0.22***	-	-	-
Wife's Disease History						
None	ref	ref	ref	ref	ref	ref
Availabel	1.44	0.94 – 1.53	**0.15***	1.19	0.98 – 1.43	0.06
Husband's age (years)						
17 – 44	1.89	0.94 – 3.77	**0.07***	1.50	0.97 – 2.30	0.06
45 – 59	ref	ref	ref	ref	ref	ref
Husband's education						
Elementary school	ref	ref	ref	-	-	-
Junior high school	1.21	0.86-1.69	0.27	-	-	-
High school	1.39	1.01-1.90	**0.04***	-	-	-
Bachelor degree	1.75	1.27-2.41	**0.001***	-	-	-
Husband's occupation						
Daily Laborer	ref	ref	ref	ref	ref	ref
Farmer	1.27	0.90-1.80	**0.16***	1.09	0.85 – 1.40	0.45
Self-employed	1.07	0.84-1.37	0.56	1.02	0.90 – 1.16	0.68
Private employee	1.31	1.08-1.60	**0.006***	1.14	1.02 – 1.28	**0.01***
Government employee	1.56	1.26-1.93	**<0.001***	1.36	1.10 – 1.68	**0.004***
Husband's monthly income						
Below the minimum wage	ref	ref	ref	ref	ref	ref
Above the minimum wage	1.10	0.95 -1.27	**0.18***	-	-	-
Knowledge about the danger signs of pregnancy, labour, and postpartum						
Less	ref	ref	ref	ref	ref	ref
Fair	1.33	0.94 – 1.88	**0.10***	1.19	0.98 – 1.45	0.065
Good	1.66	1.20 – 2.29	**0.00***	1.23	**1.02 – 1.50**	**0.028***
Husband's knowledge about BPCR						
Less	ref	ref	ref	ref	ref	ref
Good	10.39	5.12-21.08	**<0.001***	9.83	4.83 – 19.96	**<0.001***

Based on Table 4 from the multivariate analysis. it is evident that occupation and knowledge have an impact on P4K. Husbands who work as government employees or private sector employees have a 36% (aPR 1.36; 95% CI 1.10-1.68) and 14% (PR 1.14; 95% CI 1.02-1.28) greater chance respectively, of playing a good role in P4K compared to husbands who work as laborers.

Husbands with good knowledge about the dangers of pregnancy, labour, and postpartum have a 23% (aPR 1.23; 95% CI 1.02-1.50) greater chance of playing a good role in P4K compared to husbands with less knowledge. Husbands with good knowledge about P4K have a 9.83 times (aPR 9.83; 95% CI 4.83-19.96) higher chance of playing a good role in P4K compared to husbands with less knowledge.

DISCUSSION

This study assessed the husband's plan to participate in birth preparedness and complication readiness, as well as its associated factors, in the Kebumen district. The results showed that 214 (71.33%) husbands in Kebumen Regency played a positive role by implementing at least 6 indicators from the 8 indicators of the husband's role in BPCR. The research results indicate that the husband's role in BPCR in Kebumen Regency is higher than in previous studies. The study in Axum town, Ethiopia, reported a rate of 46.9% [9]. Meanwhile, a study in Haramaya District, Ethiopia, found that 55.4% of husbands played a positive role in P4K (10). A study in Nay Pyi Taw, Myanmar, indicated that 57.6% of husbands played a positive role in BPCR [11].

Husband involvement in labour planning complication prevention is crucial for reducing the maternal mortality ratio [12]. The results of this study are consistent with previous research [12,13], which indicates that husbands with good knowledge of BPCR play a significant role in labour planning and complication prevention programs. With good knowledge, husbands become more aware of potential dangers during pregnancy and labour, leading them to seek appropriate healthcare [11].

Based on the analytical study, it was found that there is a relationship between husbands who work as government employees or in the private sector and their role as good husbands in BPCR. Government employment tends to involve higher levels of education, potentially higher income, which places them in a better position to save money, make better decisions, and understand the importance of prioritizing health [14].

Moreover, educating husbands on danger signs during pregnancy, labor, and postpartum has significantly improved delivery outcomes, This study established low levels of knowledge on danger signs of during pregnancy, labor and postpartum, which correlates with systematic review findings where men's knowledge of pregnancy complications and level of maternal health utilization is low; an indication of decision making from an uninformed perspective. Therefore, there is a need to design and execute programs that involve husband sensitization on danger signs during the perinatal period to improve their knowledge of emergency obstetric conditions and danger signs [15].

CONCLUSION

Husbands who have sufficient knowledge about the danger signs of childbirth (48.57%) and postpartum danger signs (55.33%), as well as the low coverage of husbands' roles in preparing blood donors and determining postnatal family planning, are variables that generally affect the success of the BPCR implementation in Kebumen Regency. Actively involving husbands in maternity classes aims to increase knowledge about the dangers of childbirth, pregnancy, and postpartum, as well as knowledge about P4K. This way, husbands can provide practical support to pregnant women and play an active role in the processes of pregnancy, childbirth, and postpartum care.

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