

# Increasing the Knowledge Capacity of Midwife About Active Management Placenta Drainage Through Video at PONEC Aceh Besar Health Center

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## ABSTRACT

The Ministry of Health (Kemenkes) noted that the maternal mortality rate in Indonesia was 4,627 people in 2020. This number increased by 8.92 % from the previous year, 4,197 people. The leading cause of maternal mortality is postpartum hemorrhage. Efforts to prevent postpartum hemorrhage can be started early, namely active management of the third stage with placental drainage. The use of placental drainage aims to reduce the volume of the placenta, support the effectiveness of uterine contractions, and accelerate separation and expulsion. Not all midwives are aware of active management of the third stage with placental drainage. For this reason, it is necessary to strengthen midwives' knowledge about placental drainage in active management of the third stage through videos. This research uses a quasi-experimental design with a one-group posttest only design to determine the knowledge and skills of midwives about placental drainage. The population in this study were midwives who served at the PONEC Aceh Besar Health Center. The sample was midwives who served at the Want Jaya, Sibreh, Montasik, Seulimum, and Lhoong Health Centers, totaling 99 midwives. The results showed a relationship between the midwife's knowledge about placental drainage and the midwife's skills with a P-value of 0.000 with an R-value of 0.872, which means that the relationship between the knowledge and skills of the midwife is solid. There was an increase in the average knowledge of midwives by 84.14 and the average skill of midwives by 75.81.

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## 1. Introduction

The maternal mortality rate (MMR) in Indonesia is 177 deaths per 100 thousand live births [1]. The ratio is already better than a dozen years earlier, with more than 200 deaths per 100,000 live births. Indonesia's MMR is still the third-highest in Southeast Asia [2]. The high incidence of maternal morbidity and mortality is the leading cause is by postpartum hemorrhage (28%), eclampsia (22%), complications of miscarriage (12%), and sepsis (9%) [3]. Bleeding is a complication of childbirth that can occur in early pregnancy, during, and postpartum. Many factors cause postpartum bleeding, including ineffective uterine contractions called uterine atony, perineal rupture, and placental retention [4]. A placenta that fails to separate spontaneously can cause significant surgical and hemorrhagic morbidity [5],[6]. A retained and untreated placenta is considered the second leading cause of postpartum hemorrhage (PPH) [7],[8]. Efforts to prevent postpartum bleeding can be started at the earliest stage. Every delivery assistance must implement efforts to prevent postpartum hemorrhage, including monitoring the progress of labor using a partograph, active management of the third stage, and close monitoring of postpartum uterine contractions [9]. The labor process has stages of care called the first stage; the first stage is the opening stage, the second stage is the baby's delivery, the third stage is the uterine stage, and the fourth stage is the postnatal monitoring, with extra care from each stage. The third stage of labor is

called the uterine stage, which is defined as the period after the baby is born until the birth of the placenta and its membranes [ 10].

Active management of the third stage is carried out to prevent bleeding, accelerate the separation process, and deliver the placenta by administering uterotonics within the first minute after the baby is born and performing controlled stretching of the umbilical cord. The best approach as an effort to reduce the incidence of postpartum hemorrhage and complications in various conditions has been recommended by obstetricians to deliver the placenta either by vaginal delivery or by cesarean delivery with placental drainage [11],[12].

Placental drainage is to immediately release the umbilical cord clamp towards the mother after cutting the umbilical cord and let the blood flow, which aims to reduce the volume of the placenta, support the effectiveness of uterine contractions, accelerate separation and expulsion[ 12]. Placental drainage is more effective when integrated into third-stage management practices [13]. Placental drainage in active management of the third stage has been shown to accelerate and reduce blood loss in the third stage. the average length of the third stage with placental drainage was 4.33 minutes shorter than that without placental drainage of 6.22 minutes, with a difference of 1.89 minutes [14]. Based on a preliminary study conducted at the Darul Imarah Health Center, it was found that midwives did not know about placental drainage in the active management of the third stage. This is because, so far, the implementation of active management in the third stage has been carried out by midwives by clamping the umbilical cord. For that, we need a learning media about placental drainage techniques in active management of the third stage to increase the knowledge capacity of midwives. Video is one of the learning media to achieve learning effectiveness and efficient learning to maximize the achievement of learning objectives quickly [ 15]. How is the average knowledge of midwives about placental drainage on the length of the third stage of labor through video at the PONEA Health Center in Aceh Besar District?.

**2. Method**

This study used a quasi-experimental design with a one-group posttest only design to determine the knowledge and skills of midwives about placental drainage. The posttest was carried out after being given knowledge about placental drainage and midwifery skills using a checklist after watching the video. The research location was carried out at the PONEA Health Center, Aceh Besar District. The time of the study was carried out from October to December. The population in this study were midwives who served at the PONEA Health Center in Aceh Besar District. The sample in this study was midwives who served in 5 PONEA Health Centers with the criteria of midwives serving in the PONEA Health Center area, including Sibreh Health Center, Montasic Health Center and Want Jaya Seulumum Health Center, Lhong Health Center. The instruments in this study were knowledge checklist sheets about placental drainage, skill observation checklists, and videos about placental drainage. The data collected was primary data obtained directly from respondents in the form of observations on the implementation of third stage management of placental drainage using video—secondary data obtained from reference sources da. N reports related to this research problem. Data processing is carried out with editing, coding, and entry cleaning stages. Data analysis using analysis univariate and bivariate and testing the data using the Spearmen correlation test.

**3. Results and Discussion**

**3.1 Univariate Analysis**

TABLE 1  
DISTRIBUTION OF RESPONDENTS FREQUENCY BY PONEA HEALTH CENTER IN ACEH BESAR DISTRICT

No	Public health center	F	%
1	Saber	16	16.2
2	Montasic	14	14.1
3	Seulumum	24	24.2
4	Long	11	11.1
5	Want to be successful	34	34.3
	Amount	99	100

Based on table1 above, it can be seen that the majority of respondents came from the Want Jaya Health Center, which amounted to 34 midwives (34.3 %)

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TABLE 2  
FREQUENCY DISTRIBUTION OF RESPONDENTS BASED ON AGE, LENGTH OF WORK, AND LAST EDUCATION BASED ON PONEK HEALTH CENTERS IN ACEH BESAR DISTRICT

No	Variable	F	%
1	Age		
	Early adulthood (26-35 years old)	49	49.5
	Late adulthood (36-45 years)	31	31.3
	Early elderly (46-55 years old)	17	17.2
	Late elderly (55-65 years old)	2	2
2	Length of working		
	New (<6 yrs )	13	13.1
	Medium (6-10 years old )	20	20.2
	Late (>10 yrs )	66	66.7
3	Last education		
	D1	5	5.1
	D3	83	83.9
	D4	10	10
	S2	1	1
Amount		99	100

Based on table 2 above, it can be seen that the majority of midwives aged 26-35 years old were 49 (49.5%), with a length of work >10 years totaling 66 (66.7%), and had a D3 education as many as 83 (83.9%).

TABLE 2  
RESULTS OF THE CORRELATION ANALYSIS OF KNOWLEDGE AND SKILLS OF MIDWIVES ABOUT PLACENTA DRAINAGE IN THE ACEH BESAR REGION

Variable	mean	SD	P-value	R
Skill Knowledge	84.14	8.807	0.000	0,872
	75.81	7,017		0,872

Based on table 3 above, the average knowledge of midwives is 84.14 with an SD of 8.807, and the average skill of midwives is 75.81 with an SD of 7.017. there is a relationship between the knowledge and skills of midwives at the PONEK Health Center in Aceh Besar District with a P-value of 0.000. After the Spearman correlation test, the r-value of 0.872 means that the relationship between the knowledge and skills of the midwife is solid

### 3.2 Discussion

The results showed a relationship between the knowledge and skills of midwives at the Pond Health Center in Aceh Besar District with a P-value of 0.000. The majority of midwives are 49 ( 49,5 %) early adults aged 26-35 years, 66 (66,7%) have worked for more than ten years, and 83 (83.9%) have D3 education. There is good evidence that an active management package for the third stage of labor in women with mixed bleeding risk reduces the occurrence of severe PPH by approximately 60% to 70% [12]. A policy survey in 14 European countries found that policies on the use of uterotonics for the management of the third stage of labor are widespread, but policies regarding agency, timing, clamping, and cutting of the umbilical cord and the use of controlled cord traction are very different [16]. Differences in policy and quality of care have been cited as the cause of the significant (up to 10-fold) differences in postpartum hemorrhage rates between countries in Europe [17]. The results of interviews with midwives who have applied placental drainage techniques said that the length of the third stage with placental drainage is shorter than with umbilical cord clamping. The average length of the third stage with placental drainage was 4.33 minutes shorter than that without placental drainage, 6.22 minutes, with a difference of 1.89 minutes [18].

The average length of the third stage and the amount of blood loss in the placental drainage group was 4 minutes 28 seconds and 162 ml, compared to the control group, 6 minutes 24 seconds and 245 ml, with a p-value of 0.00, so it was concluded that placental drainage accelerated the third stage and reduced the amount of bleeding—stage III [19]. Without removing the clamp after cutting the umbilical cord, about 100 ml of blood is trapped in the placenta. To evaluate the impact, it was found that not all midwives had performed placental drainage techniques. This is because there are no patients who give birth when on duty. According to the researcher's assumption, the lack of

knowledge of the midwife is the technique of placental drainage; this is because so far, the active management of the third stage in the field uses the umbilical cord clamping technique. Some midwives have applied the placental drainage technique because it can accelerate the third stage and prevent postpartum hemorrhage.

#### 4. Conclusion

There is a relationship between knowledge and skills of midwives in active management of the third stage of labor in Aceh Besar with a P-value of 0.000 and an r-value of 0.872, which means that the relationship between knowledge and skills of the midwife is solid.

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