

## Umbilical cord clamping: Midwife's perspective at one of the regional general Hospitals of Gorontalo Province

Rindi Wulandari Sukarno <sup>1,\*</sup>, Dwi Izzati <sup>2</sup> and Euvaenggelia Dwilda F <sup>2</sup>

<sup>1</sup> Bachelor of Midwifery Student, Faculty of Medicine, Airlangga University, Indonesia.

<sup>2</sup> Lecturer, Faculty of Medicine, Airlangga University, Indonesia

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### Abstract

The incidence of iron deficiency anemia in infants is a problem that often occurs in all countries, especially in developing countries, which is caused by visible dan invisible blood loss, decreased red blood cell production, premature cell destruction, premature birth, LBW, small gestational age, maternal anemia dan time of umbilical cord clamping. Delaying cord clamping by 1-3 minutes allows blood flow between the placenta dan neonate to continue, which can improve iron status in the baby for up to six months after birth. In Indonesia, 62.7% of births are attended by midwives, so the midwife's perception plays an important role in deciding when to clamp the umbilical cord during childbirth care.

**Objectives:** To determine the perception of midwives in one of the regional general hospitals of Gorontalo province regarding delays in clamping the umbilical cord.

**Methods:** This research uses a qualitative method with a phenomenological approach. Data collection was carried out on 7 informants using in-depth interviews dan the results of the interviews were analyzed using thematic analysis.

**Results:** There is a difference between the informant's perception dan the practice carried out by the informant regarding the delay in clamping the umbilical cord.

**Conclusion:** This difference in perception is caused by the informant's education which is dominated by DIII level, less than optimal training, experience during work, dan the work environment.

**Keywords:** Anemia; Umbilical Cord; Delaying Umbilical Cord; Midwife

### 1. Introduction

Until now, anemia is still a global problem, especially in developing countries. WHO noted that the prevalence of anemia in children aged 6-59 months in 2019 was 39.8%, equivalent to 269 million children, of which the highest prevalence occurred in children under five, with the highest burden being in the South Asia, West and Central Sub-Saharan Africa regions [1][2]. The incidence of iron deficiency anemia in babies is caused by visible or invisible blood loss, decreased red blood cell production, or premature cell destruction, premature birth, low birth weight, small gestational age, maternal anemia and umbilical cord clamping time[3][4].

Iron has a great influence on hemoglobin production, the metabolic system, the oxidation system, nerve development and function, tissue system connections and the hormone system. Iron deficiency can cause babies to frequently get infections, hamper the child's cognitive, motor, sensory and social growth, if not treated properly, the impact can be permanent [5] [6].

\* Corresponding author: Rindi Wulandari Sukarno

In Indonesia, 62.7% of vaginal births are attended by midwives [7]. In the regional general hospital where the research was carried out there were 502 vaginal births, 97.9% of which were carried out by midwives. The midwife's perception of delaying umbilical cord clamping plays an important role in deciding when to clamp the umbilical cord during delivery care. Perception is an important psychological aspect for midwives in responding to various aspects and symptoms around them. Perception results may differ from one individual to another. Each individual has a tendency to see the same object in a different way, these differences can be influenced by many factors including knowledge, attention, experience, repetition, frame of reference, frame of experience, emotions and point of view [8] [9] [10]. The aim of this research was to find out more about midwives' perceptions regarding delays in umbilical cord clamping

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## 2. Material and methods

This research uses a qualitative method with a phenomenological approach. The data in this study was conducted by conducting in-depth semi-structured interviews with 7 informants who work in hospitals. Midwives who participated in the research were midwives who were still active in assisting childbirth. The midwife was given information regarding the research objectives verbally and in writing as well as the confidentiality requirements for this research, then the midwife signed an informed consent. Interviews were conducted at a place agreed upon by the midwife and researcher, a place they thought was comfortable for conducting the interview. There was no personal relationship between midwives and researchers. This research has passed ethical requirements at Airlangga University, Faculty of Medicine. Each interview lasted approximately 50-60 minutes.

Data analysis in this research uses a thematic analysis approach, namely understanding themes from a collection of data obtained from informants in various sources, including interviews, surveys, or observations [11] The results of the interview are transcribed in manuscript form, then data analysis is carried out by organizing the data, breaking it down into units, synthesizing it, arranging it into patterns, choosing what is important and what will be studied and making conclusions that can be shared with others [12]

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## 3. Results

The midwives who were informants in this research were aged 26-48 years with a working period of 4-27 years. 3 informants with DIII education and 4 informants with DIV education, each informant has attended midwife update training, normal birth care and active management of the third stage.

The findings in this research include 5 main themes which are divided into sub-themes. The theme 'umbilical cord clamping time' is divided into 3 sub-themes, knowledge about the delay in umbilical cord clamping, technical umbilical cord clamping time, and compliance with umbilical cord clamping times. The theme 'requirements for delaying umbilical cord clamping' is divided into 2 sub-themes, immediate umbilical cord clamping in newborns with problems and delaying umbilical cord clamping in babies who need treatment. The theme 'benefits of delaying umbilical cord clamping'. The theme 'preparation for delaying umbilical cord clamping' is divided into 2 sub-themes, preparation during the antenatal care period and preparation during the intranatal care period. The theme 'factors that influence midwives' perceptions' is divided into 5 sub-themes, experience, repetition, emotions, frame of experience and frame of experience.

### 3.1. The theme of umbilical cord clamping

#### 3.1.1. Sub-theme: knowledge of umbilical cord clamping delay time

In the analysis of interview transcripts, it was found that there were differences in perceptions between informants regarding the delay in umbilical cord clamping, and several informants also said they had never heard of delayed umbilical cord clamping.

In1

The delay in clamping the umbilical cord is 5-10 minutes.

*"Kaloo depe keadaan bayi bagus sih, tapi tidak lama, kaya cuman... 5 sampai 10 menit" In1*

In2 and in3

Delay in clamping the umbilical cord is carried out 1-3 minutes after the baby is born.

*“eee apa.. kalauuu kan penundaan itu 1 sampee 3 menit lah”*

*“biasa 1-3 menit begitu toh, iya” In3*

### 3.1.2. Sub theme: technical umbilical cord clamping time

During the interview, 5 out of 7 informants said that they clamped the umbilical cord after 1 minute of oxytocin, 1 informant said that they delayed clamping for 1-3 minutes after the baby was born and 1 informant said that they clamped the umbilical cord before injecting oxytocin.

In2

Informant In2 said that after the baby was born, clamping the umbilical cord was delayed for 1-3 minutes while observing the general condition of the mother and baby or after the umbilical cord stopped pulsing.

*“Setelah bayi lahir Ituu ee tali pusatnya belum langsung dipotong..... di tunda dulu pemotongan tali pusat untuk molihat KU ibu dan KU bayi.*

In4, In5, dan In6

Informants In4, In5 and In6 said they clamped the umbilical cord after oxytocin injection in the first minute.

*“Baru somoo potong tali pusatt Abis injeksi oksii ..... Setelah itu Kasih lahir placenta” In4*

*“Kan pas lahir bayi... Baru injeksi oksitosin, baruuu melakukan Injeksi oksitosin, baru torang lihat kalau keadaan bayi lahir .... bagus, langsung klem tali pusat, baru potong, Potong tali pusat, baru lakukan PTT” In5*

*Lanjutkan oksii. Eeeeeeeee Ehm, bagaimana dulu.....? Potong, lakukan pemotongan tali pusat. Tapi diiii pakeee waktu 1 sampaiiii 5 menit. eh, 2 sampai, eh, astaga, maaf, 1 sampai 3 menit (sambil sedikit tertawa) depe waktu,iya” In*

In7

The In7 informant said that he clamped the umbilical cord before injecting oxytocin.

*“Yang langsung digunting, kalau yang saya ingat saya sih, sebelum pemberian oksitosin.*

### 3.1.3. Sub theme: Compliance with the timing of umbilical cord clamping

In2

Informant In2 said that when deciding the umbilical cord can be clamped, that is by asking the friend in charge of receiving the baby whether the umbilical cord can be clamped or by feeling the pulse on the umbilical cord.

*“Biasa kan, ada yang ba trima bayi itu Jadi Sama-sama somo kolaborasi kasana.. Sudah eee Seboleh depee.. depe ini semua jepit, bagituuu yang ba trima bayi to...di rabah itu tali pusatnya to, lihat tali pusat juga kalou segar atau bagaimana sudah layu,..... kalau kita kan rabah tali pusatnya apakah masih ada denyutan itu kan itu berarti aliran darah itu masih ada mengalir sama bayi kan....”*

In3, In4, In5 dan In6

Informants In3, In4, In5 and In6 said that they delayed clamping the umbilical cord only by estimating that the time had been more than 1 minute.

*“Iya, kan hanya perkiraan. Jadi ini lahirnya tadi jam segini, baru sekarang, sojam berapa sekarang? Oh ini sudah lebih dari satu menit” In3*

*“emm kira-kira,” In4*

*“menentukan waktunyaaaa, eee perkiraan sih, kira kira saja” In5*

*“Kalau itu torang yang kerja,pasti tidak perlu baliat jam, itu torang kira-kira itu berapa meniit” In6*

## 3.2. Theme Requirements for delaying umbilical cord clamping

### 3.2.1. Sub theme: Immediate umbilical cord clamping in newborns with problems

4 out of 7 informants, informants said that delaying umbilical cord clamping was carried out when babies were born crying immediately and umbilical cord clamping was immediately carried out on babies who needed treatment.

*“ Eeee tergantung kalau misalnya ada bayi yang asfiksia atoo dengan bayi yang lahir mekonium kental, biasa torang langsung jepitkan untuk persiapan eeee rusitasi ....” In3*

### *3.2.2. Sub Theme: Delay in clamping the umbilical cord in babies who need treatment*

3 of the 7 informants, informants said that newborn babies who do not cry immediately are given initial treatment first, such as tactile stimulation, suction, resuscitation until the baby cries or when the baby needs assistive devices such as neo pap, then clamping is carried out. umbilical cord.

*“Kalau tidak bagus..... paling lama itu 5 menit, 3 5 menit bagitu*

*Biasa bayi lahir dengan lilitan tali pusat, lilitan tali pusat dia langsung potong tali pusat, tapi yang ada tunda 3-5 menit itu karena bayi lahir tidak segera menangis, jadi torang masih fokus, di ba suction, baru rangsang taktil, baru sampe sementara pasang neopap lagi. Kalau dia so manangis, sudah somo potong tali pusat” In5*

### *3.2.3. Sub theme: Benefits of delaying umbilical cord clamping*

All informants said that the longer the umbilical cord is clamped, the better it is for the baby. According to the informants, delaying umbilical cord clamping can increase the nutrition transferred from the placenta to the baby, increase placental blood transfusions to the baby, can increase iron reserves in the baby, and can reduce the incidence of anemia in babies, but 1 informant also said that apart from being beneficial, delaying Umbilical cord clamping also has the side effect of increasing the incidence of jaundice in babies.

In2

Informant In2 believes that delaying umbilical cord clamping has good benefits for the baby, it can prevent anemia in babies.

*“bagus, karena itu apaaa... itu masih apaa penundaan itu supaya zat-zat besi dari ibunya itu mengalir dii melalui placenta itu kan, aliran darah itu jadi sangat bagus untuk bayi, mencegah anemi pada bayi kan itu”*

In4

According to informant In4, by delaying umbilical cord clamping the blood transfusion from the placenta to the baby will still continue and can increase the baby's immune system, however according to informant In4 delaying umbilical cord clamping can also cause jaundice in the baby.

*“banyak manfaat olo sih, biasanya untuk pemotongan, penundaan pemotongan tali pusat itu, misal depe aliran darah dari plasenta itu masih mo masuk pa bayi lewat tali pusat itu, supaya olo kan biasa ehmm ada bayi-bayi yang pucat bagitu lahir dengan pucat depe badan, depe ini, depe manfaat untuk penundaan tali pusat itu mengalirkan darah dari plasenta ke bayi, biasa untuk kekebalan tubuh bayi juga penundaan pemotongan tali pusat itu bagus”*

## **3.3. Theme Preparation for delaying umbilical cord clamping**

### *3.3.1. Sub Theme: Preparation during the antenatal period*

The informant said that the failure to delay umbilical cord clamping was due to the mother's lack of knowledge about the benefits of delaying umbilical cord clamping, therefore education about delaying umbilical cord clamping should be carried out by community health center midwives or village midwives during the antenatal period.

In5

Education about delaying umbilical cord clamping should be carried out during the antenatal period so that mothers know the benefits of delaying umbilical cord clamping.

*“Emmm mungkin karna pertama kurangnya pemahaman eeeee yang keduaaa mungkin karna tidak ada penyuluhan dari bidan bidan desa dari puskes makanya pas dorang melahirkan di rumah sakit dorang tidak minta untuk dilakukan penundaan tali pusat, itu stow...”*

In7

According to the informant, village midwives and community health center midwives are closer and have more contact with the mother. If the village midwife and community health center have provided education to the mother, the mother will understand the benefits of delaying umbilical cord clamping, so that when the mother comes to the hospital, the mother herself is the one who will ask for a postponement without having to be offered by the hospital midwife first.

*"Jadi alangkah baiknya sebenarnya kalau yang begitu itu, dari bidan desanya yang menyampaikan, dari awal kehamilan. Supaya kan ketika dia melahirkan, dia sudah sampee di rumah sakit, tanpa diminta, kita yang bidan di rumah sakit yang minta"*

### 3.4. Theme: Repetition

Several informants said that delaying umbilical cord clamping was not always done, several other informants said they never delayed umbilical cord clamping, but informants also said that umbilical cord clamping was carried out after injection oxytocin in the first minute.

In1 and In2

Informants said that some mothers delayed umbilical cord clamping.

*"Kalooo kadang, dua-duanya itu torang jaga bekeng. Kadang torang mo tunda, kadang jugaa torang langsung mo gunting"*  
In1

*"Fifty fifty, tidak selalu iya, kalua liat no, tidak selamanya langsung ditunda, ada kalanya ada yang lain ada yang langsung"*  
In2

### 3.5. Theme: Emotions

Informant In1 said that the timing of the implementation, for example giving birth at night, made the informant lazy to postpone umbilical cord clamping, while informant In4 said that delaying clamping was troublesome.

*"Cuman kalau kayak somalam bagitukan, torang so malas, mo bha (sambil sedikit tertawa) tunda. Jadi langsung, gunting, jepit, gunting"* In1

*"emm biasa ini sih ribet baku-baku bawa dengan plasenta, hehehe"* In4

### 3.6. Thema: Experience

From the analysis of interview transcripts with informants, several informants said that their experience in delaying umbilical cord clamping was influenced by several reasons such as the condition of the baby, the condition of the mother, coiling of the umbilical cord, size of the umbilical cord, babies born with meconium, doctor's advice, uncooperative mothers, the mother who feels uncomfortable, the time of implementation, the midwife's mood at that time, the mother's family's request and the family's beliefs.

At the time of the interview, all informants said that in the past several doctors had used lotus birth, the duration of lotus birth was different between informants, there were informants who said 2 hours after the birth of the baby and there were also informants who said 12-24 hours after the birth of the new baby and then the umbilical cord was cut, but during the interview no informant said they would leave the placenta connected to the baby until the umbilical cord fell off by itself.

#### 3.6.1. Sub thema: Condition of mother and baby

In2

*"untuk yang menunda kalau menunda itu kan mau dilihat kalau bayinya bagus atau apa... tapi kalua bayinya bagus segera menangis biasa lebih dari satu menit satu dua menit baru mau dijepit"*

#### 3.6.2. Sub thema: Comfort when initiating early breastfeeding

In3

*"Biasa kan langsung IMD, kalau kondisi yang biasa saya bikin, kan bayi di IMD, cuma ada beberapa ibu yang mungkin masih awal kehamilan, kan tidak nyaman sambil IMD, sambil di bawah ada ini. Jadi se-nyamanya ibu saja"*

### 3.6.3. Sub thema: Family role

In7

Informant said that from the mother's perspective, perhaps the umbilical cord clamping was postponed, but from the family's perspective, they refused, but there were also families who asked for the umbilical cord not to be cut until the placenta was born.

*"Biasanya keluarga.*

*Kalau ibunya itu, ibunya itu mana-mana saja kalau, kalau yang, kalau kita buat itu, maksudnya kita anjurkan begini-begini, ibunya itu yang mana yang terbaik lah"*

### 3.6.4. Sub thema: Family beliefs

In7

Informant said there were families who refused to delay clamping the umbilical cord because of tradition and there were also families who asked that the umbilical cord not be cut until the placenta was born because the family believed that the placenta and baby were related.

*"karena mungkin sudah jadi tradisi, mereka mungkin mintanya dia tetap dikasih pisa"*

*"Katanya eeee keyakinannya itu adiknya, apa bagaimana eeee, kalau ari-arinya itu kan saudaranya, jadi jangan dikasih, putus dulu dorang 2 punya hubungan, nanti saudaranya lahir, baru itu bisa dilakukan pemotongan tali pusat"*

### 3.6.5. Sub thema: Mother's wish

In5

The informant said that once there was a mother with a professional background as a midwife who asked for a delay in clamping the umbilical cord for 2 hours, moreover there was never another mother who asked for a delay in clamping the umbilical cord.

*"Ada pasien begitu tapi dia bidan, baru dia minta dokter yang ada anjuran Lotus birth. 2000 barapa stow, so lupa, tapi saya itu masih di NICU, belum di sini"*

### 3.6.6. Sub thema: Midwife autonomy

In1

The informant said that one of the reasons for delaying umbilical cord clamping was when there was advice from a doctor.

*"Biasanya sih ada advis dokter"*

In2

The informant said several doctors instructed that a lotus birth be carried out on the mother he was treating.

*"biasaa itu kalau pasiennyya kalau dokter itu biasa ada yang disuruh ini tapi sekarang ini sudah jarang ini lotus"*

In6

The informant said that carrying out the action required a doctor's advice and approval.

*"Selama kalau dokter advis begitu, bekeng, Kalau dokter tidak advis begitu, tidak bekeng"*

### 3.6.7. Sub thema: Lotus Birth

In3

The informant said that in the past there were several doctors who performed and recommended lotus birth by delaying umbilical cord clamping 12-24 hours after the birth of the baby, but now this method is no longer used.

*"ada beberapa dokter yang coba bikin Lotus birth, baru, torang pernah bikin sampeee, tapi waktu itu tidak sampai berapa hari, hanya mungkin sampai 24 jam, paling lama 12 atau sampai 24 jam"*

## 3.7. Theme: frame of reference

The informant said he obtained information about delaying umbilical cord clamping through midwife education, training, reading scientific articles and social media.

In1

*"Sering baca-baca, pelatihan APN juga"*

In3

*"Kalau ini biasa, kemarin sempat ikut pelatihan APN yang terbaru, baru juga kalau masa ini kan baca-baca yang lewat-lewat di IG"*

### 3.8. Theme: frame of experience

In the interviews, several informants said they obtained information about the persistence of umbilical cord clamping through sharing with doctors and from friends who previously worked in the delivery room.

In1

*“Ada juga info dari dokter sih”*

In3

*“Iya, pernah sharing sama dokter juga” In3*

In4

*“tidak ada selama ini, cuman mungkin dokter yang, adakan dokter yang disini dokter spesialis yang ee kalau misalnya sc (ada yang dorang jaga cumu), cuman waktu bo ada senior-senior yang so bekerja duluan disini dorang bilang ada yang pernah, ada yang sc juga, sc juga kalau ada dokter spesialis satu itu yang memang e emo kase lotus birth penundaan pemotongan tali pusat”*

In5

*“Di NICU, soalnya pernah terima bayiiii yang lahir paska SC Ituu anjuran dokter eeee 2 jam pas bayi lahir baru itu bisa potong depe tali pusat, salah satu dokter itu yang anjurkan itu”*

## 4. Discussion

In the interview results, almost all informants said that they clamped the umbilical cord after 1 minute, but the informants also said that they did not confirm this directly by looking at the clock. After the baby is born, the blood transfusion process from the placenta continues until the third minute with a transfusion volume of 80-100 ml [13]. In Indonesia, the practice of clamping the umbilical cord during normal birth care is carried out two minutes after the first oxytocin injection [14]. Understanding the physiology of placental transfusion influences midwives' compliance in clamping the umbilical cord. Midwives tend to only be oriented to the baby's condition visually without considering the processes that are still occurring in the baby's body after the baby is born.

Informants also have varying perceptions regarding the time span for delaying umbilical cord clamping, these time ranges start from: 1-3 minutes, 5-10 minutes, 10-15 minutes, 2 hours and until the umbilical cord stops pulsating. According to Dept. of Reproductive Health and Research (2012) and McDonald et al., [16] delay clamping the umbilical cord for 1-3 minutes for the baby to be born, this delay is recommended for all births while starting important newborn care simultaneously or when the umbilical cord has been removed. stops throbbing. American College of Obstetrics and Gynecologists [17] recommends delaying umbilical cord clamping in term and premature babies for at least 30-60 seconds after birth. Although the time limit for delaying umbilical cord clamping is still being debated, WHO has recommended delaying umbilical cord clamping for 1-3 minutes after the birth of the baby or after the umbilical cord stops pulsating[18].

The diversity of informants' perceptions is influenced by the level of education, length of service, type of training they have attended, experience and the informants' frame of experience. This is in line with Afrilia and Arifina [19] that perception is an active process where a person is aware of an object or event using his or her sense organs. The factors that influence this perception are the five senses, attention, experience, emotions, repetition, frame of reference, frame of experience [20] [9]. In a study of very premature infants (gestational age <30 weeks) clamping the umbilical cord at least 60 seconds after birth reduced the risk of death or severe disability at 2 years of age by 17%, reflecting a 30% reduction in relative mortality without a difference in severe disability [21]. A meta-analysis study conducted by S. D. McDonald [22] shows that delaying umbilical cord clamping reduces the chance of death in premature babies by 30% compared to immediate cord clamping, including in the group of babies born before 33 weeks, reducing the chance of intraventricular hemorrhage by 30%. and the possibility of red blood cell transfusion is more than 50%. In late preterm infants and term neonates, resuscitation with an intact umbilical cord is feasible and safe and results in a better physiological transition compared to the standard practice of early cord clamping followed by resuscitation [23].

In this study, informants had 2 perceptions regarding the requirements for delaying umbilical cord clamping, namely informants who said early umbilical cord clamping was carried out on babies who needed immediate treatment, such as babies born with thick meconium and asphyxia to receive resuscitation measures and informants who said Newborns with problems such as thick meconium and umbilical cord clamping asphyxia are postponed for immediate action such as tactile stimulation, suction and resuscitation.

Informants in this study were of the opinion that education about delaying umbilical cord clamping should be carried out by midwives during the antenatal care period, so that mothers know their options at the time of delivery. According

to the informant, most of the mothers who were admitted to the hospital were referral patients who were experiencing problems with pregnancy or childbirth, so education at this time was not optimal.

Antenatal care services in Indonesia still focus on midwives as service providers and are not fully oriented towards women, so the choices of how mothers want to go through the birthing process are not yet the main thing. The antenatal care provided focuses more on the condition of pregnancy and the management of complications during pregnancy, while education about the birth process and the choice of how the mother wants to go through the birth process is not given much attention, this causes women to be less empowered to choose and decide on the care they want during delivery. Antenatal care in Indonesia focuses more on preventing obstetric complications whenever possible and ensuring that complications are detected as early as possible and treated adequately [24]

In this study, several informants said that almost all mothers had delayed umbilical cord clamping, and some said they had never delayed umbilical cord clamping. Informants who said they did not delay clamping the umbilical cord also said they clamped the umbilical cord after 1 minute of injection oxytocin. This difference was influenced by the informant's perception of the delay in clamping the umbilical cord, the minimum time stated by the informants was 10 minutes. The informants who answered that they had delayed umbilical cord clamping were informants with DIV education and had attended APN and MU training with a working period of more than 10 years, while the informants who said they had never delayed umbilical cord clamping were informants with DIV education, had never attended training, with a period of working under 5 years, informants with a DIII education and have attended MU training with a work period of under 10 years, informants with a DIII education, have attended MU training, and MAK III with a work period of less than 10 years, and informants with a DIII education, have attended training MU and APN with a service period of more than 20 years.

The intensity or strength of repetition of external stimuli will give more meaning if you pay attention to it often compared to if you only see it once. The strength of a stimulus is the power of an object that can influence perception [20].

The informant said to postpone it if he wanted to do it and not to delay it if he didn't want to do it. According to the informant, giving birth at night made the informant feel lazy about delaying clamping the umbilical cord, and also said he felt troubled when the baby was still connected to the placenta. The absence of rewards and sanctions for midwives makes midwives less motivated to delay umbilical cord clamping. Rewards are positive rewards which aim to motivate midwives to be able to maintain and improve the achievements they have achieved, as examples and role models and as motivation for the people around them, while sanctions are negative rewards in the form of reprimands, burdens and suffering in accordance with applicable regulations [25]

The informant also said that when initiating early breastfeeding, several mothers said it was uncomfortable and uncomfortable if the baby's umbilical cord was still connected to the placenta and this was also quite disturbing for midwives who would carry out active management in the third stage. The role of the family also influences the decision to postpone umbilical cord clamping or not. According to the informant, the mother in labor may accept the action that will be taken, but sometimes the family refuses. The informant also said that there are also families who ask that the umbilical cord not be clamped until the placenta is born because the family believes that the placenta is the baby's sibling and should not be separated first. The midwife as the provider of care is tasked with providing the best care for the mother, but the decision rests with the mother and family. This is in line with Ngadiyono [26] that in the process of providing care, decision making regarding an action rests with the mother and the mother's family. Lack of empowering a woman is one of the reasons women are not involved in decision making.

All informants in this study said they had experience with lotus births which had been carried out in hospitals. According to the lotus birth informant, what is applied is by clamping the umbilical cord for more than 2 hours or 12 hours-24 hours, although in actual practice lotus birth is the practice of leaving the umbilical cord unclamped and being born intact, then the umbilical cord is dry and falls off. umbilicus, this discharge generally occurs on days 3-10 after birth [27] [28]. This experience influenced the informant in determining the time limit for delaying umbilical cord clamping and influenced the midwife's autonomy in implementing the delay in umbilical cord clamping. Although until now the limit for delaying umbilical cord clamping has not been patented, the definition for lotus birth has been confirmed and until now there is no ethical regulation for this practice [26]. This makes midwives who have the perception that the delay in clamping is 2 hours or more feel that they need advice from a doctor.

Information regarding delays in umbilical cord clamping was obtained by informants from DIV education and APN training, although one informant said that the training the informant had attended was more than 10 years old. Meanwhile, informants with DIII education, who had attended midwife update training and active management in stage



III, did not mention getting information about delaying umbilical cord clamping through DIII education, Midwife update training or active management in stage III. Apart from the level of education and training, 4 informants said they obtained information regarding delays in umbilical cord clamping through reading and 1 informant said they found out information regarding delays in umbilical cord clamping through the social media Instagram.

In this study, the informant stated that he received information regarding delays in umbilical cord clamping through doctors, seniors who previously worked in the VK room, and saw delays in umbilical cord clamping while on duty in the NICU room. Apart from information regarding the delay in clamping the umbilical cord, the informant also said that he received information regarding the difficulties in implementing the delay in clamping the umbilical cord from the senior who was previously on duty in the VK room. The informant said that according to seniors, mothers often felt uncomfortable and refused to delay umbilical cord clamping, so delayed umbilical cord clamping was rarely carried out. The information that the informant obtained from other people and by observing the surrounding environment then formed the informant's perception about the time and difficulty in carrying out delayed umbilical cord clamping.

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## 5. Conclusion

Based on the results of data analysis, the informants had clamped the umbilical cord without realizing it, this was due to differences in perception regarding the delay in clamping the umbilical cord. This difference in perception is influenced by the informant's education, the type of training attended, experience when carrying out umbilical cord clamp delays and experience with people who carry out umbilical cord clamp delays. In this study, the MU training that the informant attended did not influence the informant's perception of how long the clamping delay should be.

Frame of reference and frame of experience greatly influence the midwife's perception of delaying umbilical cord clamping, the more often this is repeated, the greater the chance of the midwife carrying out umbilical cord clamping. This will also have an impact on the midwife's autonomy and the way midwives empower women to be able to choose and make decisions about what actions women want during the birthing process.

This section should be typed in character size 10pt Cambria and alignment justified. All the main points of the research work are written in this section. Ensure that abstract and conclusion should not same. Conclusion should be concise, informative and can be started with summarizing outcome of the study in 1-2 sentence and ended with one line stating: how this study will benefit to the society and way forward.

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## Compliance with ethical standards

### *Acknowledgements*

Author should write about third party like funding agencies, institution where experiment is carried out or who help in the experiment apart from authors.

### *Disclosure of Conflict of interest*

This research does not have any conflict of interest from other parties

### *Statement of ethical approval*

This research does not intervene with the informants so it does not pose a risk of harm, but this research has the potential to disturb the informants' time

### *Statement of informed consent*

Prospective informants are given the opportunity to ask questions about the research and if the information has been approved, the informant signs informed consent as proof of approval.

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