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Clinical Characteristics of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic 2012-2019 period

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ABSTRACT

The lotus birth method of delivery is a method of delivery that does not involve clamping or cutting the umbilical cord, so the umbilical cord is left with the baby and is connected to the placenta, until the umbilical cord is dry and falls off by itself.(Sedana, 2022). This study aims to determine the clinical characteristics of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the period 2012 – 2019. The location of this research is located at the Permata Bunda Maternity Clinic, Buleleng Regency, Bali Province. This type of research is descriptive observational research with a cross-sectional research design. The population used in this study were all pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the period June 2012 - December 2019. The sample for this study was taken using a random sampling technique that met the research inclusion criteria. The variables in this study were the patient's age, weight, gestational age, uterine fundal height, blood pressure, parity, previous delivery method, and pregnancy spacing. The data obtained will be presented using Microsoft Excel software and analyzed using the SPSS (Statistical Package For Social Science) program. The data that has been collected will be processed and presented in table form. Based on the results of research conducted regarding the characteristics of pregnant women who gave birth using the lotus birth delivery method at the Permata Bunda Maternity Clinic for the period 2012-2019, the following conclusions were obtained: from the results of this study it was found that (87.9%) of the subjects of this study were aged 20-35 years , (60.6%) multigravida, (60.6%) had a pregnancy interval of more than 1 year, (100%) gave birth vaginally, had an average body weight (64.83 kg), (100%) patients gave birth at term (term), (78.8%) uterine fundal height according to gestational age, and (100%) normal blood pressure.

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1. INTRODUCTION

About a quarter to half of the deaths of babies under one year old occur in the first week, where every year around 20 babies per 1,000 births die within 0-28 days after birth (Purba & Firda, 2019). According to WHO (2018), in developing countries every year four million babies die in the neonatal period. It was reported that 300,000 babies died from tetanus, and another 460,000 died from severe infections with umbilical cord infections as one of the important predispositions (Smith, 2018). The rate of umbilical cord infection in developing countries varies from 2 per 1000 to 54 per 1000 live births with a case fatality rate of 0-15% (Natiqotul, 2017). Infection in newborns is one of the causes of infant death, especially in developing countries. Death due to umbilical cord infection causing neonatal tetanus. Factors that contribute to the emergence of umbilical cord infections in developing

countries include births carried out at home with poor hygiene and sanitation, untrained birth attendants and some traditional methods of caring for umbilical cords that are not sterile (Sianturi, 2019).

Childbirth is a process or method of removing the products of conception from the mother's womb through the birth canal or other means, after which the fetus can be expelled to the outside world (Saleh, 2020). The focus of normal delivery care is clean and safe delivery and preventing complications. This is a paradigm shift from waiting for it to happen and then treating complications, to preventing complications. Clean and safe delivery and prevention of complications during and after delivery have been proven to reduce morbidity or death for mothers and newborns. Some examples of developments in obstetrics science related to evidence based practice are: gentle birth, water birth and lotus birth (Linda Sanjaya et al., 2021)

The world of medicine, especially the fields of obstetrics and gynecology, is currently paying special attention and treatment to the placenta of newborn babies. The birth process of pregnant women is now in a new and unique period, because the birth process no longer only concentrates and deals with careful handling according to standard operating procedures (SOP) for how babies are handled in labor, but also includes SOPs for handling the pregnant mother. giving birth, and even how the placenta is handled with care that is no less important than handling the baby and mother. This means that now and in the future the realm of childbirth management, from an obstetrics and gynecology perspective, is a package that includes handling the mother in labor, handling the baby in the birth process, and also handling the placenta. One of the treatments for the placenta that is unique is delivery using the lotus birth method or what is called delayed cutting of the umbilical cord (Sedana, 2022)

The lotus birth delivery method is a delivery method that does not involve clamping or cutting the umbilical cord, so that the umbilical cord is left with the baby and is connected to the placenta, until the umbilical cord is dry and falls off by itself (Sedana, 2022); (Imannura, 2016). The umbilical cord is the connection between the baby and the placenta. The function of the umbilical cord is to distribute nutrients and oxygen from the mother to the fetus. Cutting the umbilical cord before it falls off can be dangerous for newborn babies because it makes them twice as susceptible to infection. After delivery, the umbilical cord will separate itself from the baby's body within 3-10 days (Saleh, 2020).

This delivery method is claimed to increase the flow of blood volume from mother to baby, thereby preventing iron deficiency anemia in newborns(Natiqotul, 2017). The results of a review of several literatures describe other benefits of the lotus birth delivery method, namely: first, it does not provide an opportunity for germs to enter the baby's body through the umbilical cord because it allows the umbilical cord to remain connected to the baby and the placenta. Second, it is believed to increase the body's immunity in newborn babies because the baby's nutritional intake through the mother's blood is not interrupted. Third, it reduces intraventricular bleeding by 59% in premature babies and reduces necrotic enterocolitis by 62% in premature babies (Courtney et al., 2020). Fourth, the baby gets more blood containing oxygen, food and antibodies, thus giving the umbilical cord time to separate from the baby naturally (Herlyssa et al., 2015). Delays in cutting the umbilical cord should be considered as a standard in term births. The lotus birth delivery method is also known as delivery which allows the baby's umbilical cord to remain connected to the baby after birth, without pinching or cutting it, so this will be the main protection for the baby from being exposed to bacterial infections that can enter through cutting the umbilical cord (Sukarta & ; Rosmawaty, 2019).

Referring to research (Sari et al., 2019) conducted by Febriana Sari, it was found that respondents with the lotus birth method mostly had hemoglobin levels and also hematocrit levels in the high category, while respondents without the lotus birth method mostly had hemoglobin levels and hematocrit levels in the normal category. In line with research conducted by Philip (2014). These two groups had a significant difference in that babies' umbilical cords clamped for more than 3 minutes had higher hemoglobin levels and high ferritin levels at 6 months of age, which could improve iron status in babies. Infancy is a time of rapid brain growth and development and iron is very important for this process. Based on existing literature, after birth, newborn babies contain 80 ml of blood from the placenta in the first 1 minute of life and 100 ml 3 minutes after birth (Sari et al., 2019). This volume will supply 40 to 50 mg/kg extra iron to have 75 mg/kg of iron in the body of a full-term

newborn, reaching a total of 115-120 mg/kg, which can prevent iron deficiency in the first year of life, which is This can result in central nervous system disorders such as cognitive impairment(Sedana, 2022).

*Lotus birth*Generally it is rarely practiced in hospitals but is generally carried out by clinics or maternity homes which concentrate on the practice of gentle birth or natural birth, because this labor process requires different treatment from patients in hospitals which will certainly make the mother feel more comfortable and experience the sensation of giving birth. like at home, therefore the bonding attachment process between mother and baby can be carried out well, of course this will be beneficial for the mother and newborn baby. Even though it is a new alternative phenomenon, delayed cutting of the umbilical cord already exists in Balinese culture, treating the placenta after it breaks is important, especially socio-culturally. Balinese Hindu society generally carries out ritual procedures in treating the placenta. The ritual procedure for treating the placenta, actually correlates with the belief of the Balinese Hindu community, that since the meeting of "Kama Putih and Kama Bang", namely when the sperm of the Father and Mother unite, the perfecting of the fetus has begun to occur as stated in the Lontar Kanda Empat Rare which was copied by Ketut Windia in 1972 (Sujana et al., 2018). With this, of course lotus birth now has many benefits that can be used as a background in choosing a gentle birth delivery method. This is very interesting to study in more depth about the clinical characteristics of pregnant women who give birth using the lotus birth method at the Permata Bunda Singaraja Maternity Clinic, which is one of the implementers of the pilot project for the gentle birth method, especially lotus birth in Buleleng District, Buleleng Regency, Bali Province.

2. METHOD

This research was designed using a descriptive research design with a cross-sectional approach, namely a research method whose main aim is to create an objective picture of a situation. This research was conducted to determine the clinical characteristics of pregnant women giving birth using the lotus birth method at the Permata Bunda Maternity Clinic, Singaraja, Bali.

Research subject

The population used in this study were pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic. The sample in this study was all medical record data of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period. A total of 66 pregnant women met the inclusion and exclusion criteria. This research was conducted at the Permata Bunda Maternity Clinic, Singaraja, Bali

Data analysis

This research was designed using a descriptive research design with a cross-sectional approach, namely a research method whose main aim is to create an objective picture of a situation. This research was conducted to determine the clinical characteristics of pregnant women giving birth using the lotus birth method at the Permata Bunda Maternity Clinic, Singaraja, Bali. Analysis was carried out on each variable. Variables were analyzed descriptively using the Statistical Package for the Social Science (SPSS 28) software. Data in nominal/ordinal form is presented in the form of absolute values and percentage proportions. Data in the form of ratios/intervals were tested for normality using the Shapiro Wilk test. If the data is normally distributed, it is presented in the form of mean and standard deviation. If the data is not normally distributed then it is presented in median form (minimum value and maximum value).

3. RESULTS AND RESEARCH

This research was conducted at the Permata Bunda Maternity Clinic in July 2023. This research data was obtained through direct recording from medical records. In this study, univariate analysis was carried out to determine the frequency distribution of the characteristics of pregnant women who gave birth using this method of delivery*lotus birth*at the Permata Bunda Maternity Clinic for the 2012-2019 period.

Age Characteristics of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on age can be presented as follows:

Table 1. Frequency Distribution of Respondents Based on Age

Age	Frequency	Percentage (%)
15 - 20 Years	1	1.5
20 - 35 Years	58	87.9
>35 Years	7	10.6
Total	66	100

The results of this study show that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period (87.9%) were between the ages of 20-35 years, where in second place (10.6%) were aged over 35 years old, and there were (1.5%) less than 20 years old. According to (Ekwendi, 2016) as the age of a pregnant woman increases, the higher the risk factors for carrying out a cesarean delivery compared to vaginal delivery. The safe and recommended reproductive age for a mother is between the ages of 20-35 years, but below and above this age there will be negative impacts and risks in the process of pregnancy up to delivery and the postpartum period. Research result(Hidayat, 2016)shows that pregnant women aged less than 20 years are at risk of experiencing preterm labor compared to the 20-35 year age group. Study(Wagura, 2018)showed that maternal age <20 years was significantly related to the incidence of preterm birth with a value of p=0.034. At a young age, a woman's reproductive organs are not fully perfect and her mental development is not yet mature, so that at this age a woman is said to be not ready to become a mother and accept pregnancy, which will result in obstetric complications which can increase maternal mortality and perinatal. Pregnancy at a young age has a tendency to experience complications during pregnancy and childbirth, because young women often have limited knowledge about pregnancy or a lack of information about how to properly raise children, care for newborn children, and the health care system for neonates.

Anemia that occurs in teenage pregnancy will have an impact on the baby's low birth weight, intrauterine fetal death, prematurity, repeated abortions, and bleeding during the birthing process.(Mora-Cancino, 2015). Apart from that, young women who are pregnant for the first time lack experience in caring for a pregnancy. At this age, women have not yet reached physical maturity, mental and reproductive organs that will function to become prospective mothers. The possibility of stress in pregnant women at a young age is very high, so that catecholamine and cortisol levels increase, then this will activate the placental hormone corticotrophin releasing hormone through biological pathways.(Maharani, 2020). The fertility of women over the age of 35 years begins to decline, pregnancy and childbirth at this age pose a greater risk to the health of the mother and baby. Women in their 40s can still successfully conceive normally. However, as physical conditions begin to decline, pregnant women after the age of 40 will also tire more easily. Pregnancy and childbirth over the age of 30 years have a greater risk to the health of the mother and baby. Pregnancy at this age has a higher risk of having a child with Down syndrome, namely 1: 23/30 births. They also have a risk of giving birth to a child with abnormal chromosomes, namely 1: 15/20 births. Pregnant women after the age of 40 are at risk of experiencing complications such as premature rupture of membranes, hypertension, prolonged labor, obstructed labor and post-partum bleeding. They have a greater risk of miscarriage, giving birth with tools, such as forceps or caesarean section(Leftwich, 2017).

The results of this research show that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda maternity clinic for the 2012-2019 period were at a safe age, namely between 20-35 years. The large number of mothers who have normal births in this age range shows the high awareness of mothers to carry out pregnancy and childbirth at a safe age. High maternal awareness can be caused by the large amount of information and socialization related to low-risk pregnancy and childbirth, either discovered by pregnant women themselves or obtained from education by health workers. At this age, pregnant women are in a phase where they are very ready to start a new life with their baby, coupled with mature physical and emotional development, this is the initial preparation in facing the demands of the moral, mental and emotional burdens of being a good mother. and also with information related to newborn care (neonatal care), of course this is what will be needed at the birth of lotus birth, because the mother will have two responsibilities at once immediately after the birth of the baby. In addition to caring for the baby, she must also provide care that is no less important. against the placenta until it dries and separates itself from the baby. The

results of this study also show that a small percentage of pregnant women aged < 20 years old and age > 35 years, this is because pregnant women aged less than 20 years have a tendency to experience higher stress than other ages, one of the triggering factors is a mother's lack of physical and mental readiness to welcome the birth of her baby. Pregnant women over 35 years of age have a tendency towards a decrease in body function, one of which is that their physical condition is no longer as good as it was in their youth, this becomes a burdening factor if later the mother has to spend more energy on caring for the baby and also the placenta. when does this lotus birth take place?

Parity Characteristics of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on parity can be presented as follows.

Table 2. Frequency Distribution of Respondents Based on Parity

Parity	Frequency	Percentage (%)
Primigravida	26	39.4
Multigravida	40	60.6
Total	**66**	**100**

The results of this study show that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period (60.6%) were multigravida or pregnant women who had given birth more than once, in second place (39.4%) Primigravida or pregnant women who have just undergone their first delivery. Parity is the number or number of births (children born alive) where this parity is classified as follows, firstly nulligravida which means a woman who has never given birth to a viable baby, secondly primigravida is a woman who has once given birth to a baby who has reached the viable stage. Next, multigravida is a woman who has given birth to two or more viable fetuses, and finally grande multigravida is a woman who has given birth to five or more children.(Fakhidah, 2017). Primigravida is a mother who is pregnant for the first time, where in this condition the reproductive organs are not ready to accept pregnancy because the uterus and pelvis are still small, so it can cause problems or complications for the fetus.(Princess, 2020). On the other hand, the mother's psychological or mental readiness tends not to be ready to accept pregnancy, childbirth and postpartum. Parity is an important factor in the incidence of iron anemia in pregnant women, according to(Manuaba, 2010), women who have experienced frequent pregnancies and childbirth have a higher potential for experiencing anemia because they lose a lot of iron, this is because during pregnancy pregnant women will use up the iron reserves in their body to meet the iron needs of the baby in the womb. According to theory, after repeated pregnancies up to the third pregnancy, the risk of anemia will increase, this is because repeated pregnancies cause damage to the blood vessels and uterine walls which will then affect circulation to the fetus.(Hidayati, 2018).

Parity 2 to 3 is the safest parity in terms of postpartum bleeding which can result in maternal death. First parity and high parity (more than 3) have a higher incidence of postpartum hemorrhage. At low parity (parity one) the mother's unpreparedness in facing the first birth is a factor causing the inability of pregnant women to handle complications that occur during pregnancy, childbirth and postpartum.(Fetrisia, 2022). Mothers with high parity of more than 3 children have a high maternal mortality rate because endometrial disorders can occur. The cause of endometrial disorders is due to repeated pregnancies, while first parity is risky because the uterus is receiving the results of conception for the first time and the flexibility of the uterine muscles is still limited for fetal growth.(Anandayani, 2018). Parity of more than 4 children can increase the frequency of complications in pregnancy and childbirth, such as increasing the risk of fetal death in the womb and bleeding before and after giving birth, which can have fatal consequences, because women who have given birth frequently can cause damage to blood vessels and wall vascularization. uterus due to previous birth, so that blood flow to the placenta is inadequate, which can ultimately reduce its function and affect the circulation of nutrients to the fetus (Putri, 2020). According to research(Purwandari, 2016)Regarding the relationship between parity characteristics of pregnant women and the incidence of anemia, it was found that there was a significant relationship between parity and anemia in pregnant women with a p value = 0.005. A woman's parity can affect the psychological health of pregnant women, especially pregnant women in the third trimester who will

face the birth process. Pregnant women with primigravida parity, which means they have just gone through their first pregnancy, still have no idea about what will happen during childbirth and it is often found that pregnant women in their first pregnancy feel afraid because they hear stories about what will happen when the gestational age gets closer to the time of delivery with imagination. scary birth process(Mezy, 2016). Meanwhile, the majority of pregnant women with multigravida parity already have an overview of pregnancy and the birth process from previous pregnancies. So during pregnancy you tend to prepare more mentally and psychologically(Handayani, 2015).

The results of this study show that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda maternity clinic for the 2012-2019 period were multigravida, which means they had given birth or carried out a previous birth, this had a very positive impact on lotus birth. , so that the worries of pregnant women who are going to give birth tend to be reduced due to previous experiences, and from the perspective of readiness, pregnant women who have already given birth before will certainly have more thorough preparations in order to welcome the birth of their baby. The results of this study also show that the number is smaller in primigravida because a mother who is undergoing labor for the first time requires very mature preparation both physically and mentally in undergoing the labor process. Apart from that, what is no less important is information, a pregnant mother who has Having had a previous birth, of course you have a more advanced mindset and experience, which will support your pre-natal preparations in the future to be even more thorough. This is still a deficiency in pregnant women with primigravida status so they are less ready to choose the lotus birth method.

Characteristics of Pregnancy Distance for Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on pregnancy distance can be presented as follows.

Table 3. Frequency Distribution of Respondents Based on Pregnancy Distance

Pregnancy spacing	Frequency	Percentage (%)
0 - 1 year	26	39.4
13 years old	24	36.4
> 3 years	16	24.2
Total	**66**	**100**

The results of this study show that pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period had an average birth year distance of (2.06±2,022 years) with the following frequency distribution, the majority (60.6%) have a pregnancy distance of more than 1 year, where in detail (36.4%) pregnant women have a pregnancy distance of between 1-3 years, then (24.2%) Pregnant women had a pregnancy gap of more than 3 years, while the remaining (39.4%) pregnant women had never given birth before or had a pregnancy gap of 0 years. In pregnant women, repeated pregnancies over a short period of time will cause the iron reserves in the mother's body to not recover completely and then be depleted again for the needs of the fetus she is carrying. Pregnancy spacing is also an important thing for mothers to pay attention to before the pregnancy program. The optimal one is more than 36 months of previous pregnancy, while the distance between close pregnancies is less than 2 years (Putri, 2020). Pregnant women whose birth distance between their smallest child is less than 2 years, the condition of the mother's uterus has not fully recovered and the mother's time to breastfeed and care for her baby is reduced, while pregnant women whose last birth was >10 years ago, the mother in this pregnancy and birth seems - as if facing your first pregnancy/childbirth again(Astuti, 2020).

A pregnancy distance that is too close can reduce the benefits obtained from the previous pregnancy, such as an enlarged uterus and increased blood flow to the uterus. Apart from that, if the distance is too short it will have an impact on the mother who has less opportunity for preparation and therefore does not have time to recover. reproductive system damage or post partum problems(Umba, 2018). Even though the age of 20-35 years is safe for pregnancy and giving birth, this does not mean that women can get pregnant every year, because the ideal gap between pregnancies is between 2-4 years. This is due to considerations regarding the return of the reproductive organs to their original state after the previous birth, so this is what is known as the postpartum period, namely the period when the reproductive organs return to their pre-pregnancy period.(Wahyuningsih, 2018). After

giving birth, it is highly recommended to prepare for the upcoming pregnancy for at least 24 months to reduce the risk of harm to the mother, perinatal and baby. The morbidity rate of mothers and children whose pregnancies are less than 2 years apart is greater than that of children who the pregnancy interval is 2 years(Gosmawi, 2020)Pregnancies with a gestational interval of less than 2 years will result in abortion, low birth weight, poor nutrition, and reduced breastfeeding time for the previous child. Pregnancy management with ideal pregnancy spacing can also be regulated by using rational family planning patterns. Rational family planning patterns also have the aim of saving mothers and children whose births are too close together. The best birth interval is 2-4 years so that the mother can consider the decision to conceive her next child within a period of at least 2 years so that the risk of abortion can be minimized (Manuaba, 2011).

The results of this study show that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda maternity clinic for the 2012-2019 period were at a safe pregnancy distance. Basically, lotus birth is not special and can be applied to respondents who have a safe pregnancy distance. However, based on data from almost all groups, both those who are giving birth for the first time, and those who have given birth more than once, they can also apply this birth practice, so this will support the smooth implementation of lotus birth practices which require additional treatment apart from the child. The baby also has the placenta (placenta), which is no less important. From the results of this research, it can be seen that a pregnancy that is too close will certainly affect how much care or care a mother will give to the baby, with a close distance a mother will be faced with a more hectic situation, especially having to take care of her two children like having twins. Moreover, this will certainly happen when caring for the placenta in the lotus birth method, which requires the placenta to be close to the baby until it breaks off by itself, and must also be given the same treatment as the baby.

Characteristics of the Delivery Method for Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on delivery method can be presented as follows.

Table 4. Frequency Distribution of Respondents Based on Delivery Method

Delivery Method	Frequency	Percentage (%)
Vaginal	66	100
Abdominal	0	0
Total	**66**	**100**

The results of this study show that the majority (100%) of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period underwent vaginal delivery. Childbirth is a process of opening and thinning of the cervix, from the fetus descending into the birth canal naturally and is an important process for a mother. In this process, the birthing mother will naturally expend more energy and experience physiological and psychological changes (Manuaba, 2011). There are two methods of delivery which are divided based on the method of delivery, namely delivery through the cervix or vagina which is known as vaginal birth (normal) and abdominal delivery or caesarean section delivery which is an operation to remove the baby by means of an incision in the abdominal wall and uterine wall with the condition of the uterus intact and the fetus weighs more than 500 grams(Sukma, 2020). Childbirth is divided into two categories, normal (spontaneous) birth, namely the process of giving birth to a baby at the back of the head with the mother's own power, without the help of tools, and without injuring the mother and baby, which generally lasts less than 24 hours, while abnormal labor, namely birth with assistance. tool or through the abdominal wall by caesarean section(Novita, 2022).

As written above, childbirth can be differentiated based on the method of delivery, namely normal delivery and caesarean section delivery. Labor is said to be normal if the pregnant woman experiences the process of opening and thinning the cervix and ultimately the fetus descends into the birth canal. Labor and birth can also be said to be normal if the process of expelling the fetus occurs at term or term pregnancy (37-42 weeks), is born spontaneously with a back of the head presentation that takes place within 18 hours, and does not include complications for either the mother or fetus.(Rokhamah, 2019). The success of childbirth is greatly influenced by various factors, including maternal factors including power, which means the strength of the mother to push during the birth

process, passage which means the condition of the birth canal which consists of the cervix and also the size of the mother's pelvis. If the condition of the mother's pelvis is not good, and the opening is incomplete, dystocia can occur, and psychology, namely the mother's mental readiness to give birth. Next are fetal factors (placenta), and supporting factors(Wagura, 2018).

From the results of this research, it was found that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda maternity clinic for the period 2012-2019, the majority of the 66 pregnant women who were respondents (100%) gave birth using the vaginal method, in accordance with the concept of gentle birth as stated in chapter 2, this delivery is a birthing method with a holistic approach that is soul-friendly, upholds the wisdom of childbirth which is based on natural principles and is carried out in an environment that is comfortable, friendly and familiar to the patient. Gentle birth is also called natural birth(Cunningham, 2014), where in this case the labor process of lotus birth and vaginal delivery is a process that cannot be separated like a complete package that supports the success of the gentle birth birth process. This delivery is a delivery method that provides intervention in the treatment of the baby after birth, so basically the difference in delivery methods, both vaginal and abdominal, does not become a standard for whether or not this lotus birth can be carried out.

Weight Characteristics of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on body weight can be presented as follows.

Table 5. Distribution of Mean and Standard Deviation of Respondents Based on Body Weight

Weight	Mean±elementary school
Pregnant Women's Weight (Kg)	64.83±9,800

The results of this study show that pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period out of a total of 66 respondents had an average weight of (64.83±9,800). Maternal nutrition during pregnancy is important so that the fetus can grow and develop healthily. A woman's nutrition during pregnancy and before pregnancy is certainly different. Pregnant women will need additional calories of at least 500 calories. In the early trimester, pregnant women often experience feelings of nausea, vomiting, and cannot stand the smell of food. To achieve energy needs, pregnant women are advised to eat small portions five to six times per day (ACOG, 2015). Determining the weight category of pregnant women (BMI) is based on the Body Mass Index (BMI) recommendations of the Institute of Medicine (IOM) at the beginning of pregnancy, namely if before pregnancy the woman had a normal BMI (18, 5-24.9 kg), then you have to increase your weight by around 11.3-15.9 kg, then for women who have a BMI below normal or are underweight (less than 18.5 kg), they have to increase their weight by around 12. 7-18 kg, while women who are overweight or overweight with a BMI of 25-29.9 are advised to gain just a little more weight, namely 6.8-11.3 kg and women who are obese (BMI > 30) are advised to increase their body weight a little more, namely 5-9 kg(Voerman, 2019). In Indonesia, the ideal weight of a prospective mother at the start of pregnancy is 45-65 kg. if it is less than 45 kg, it is best to increase your weight first to reach 45 kg before pregnancy, conversely if you are overweight, reduce it to 65 kg before pregnancy.(hargiono, 2016). Weight gain in pregnant women is not only caused by the enlargement of the fetus, but also due to the enlargement of the placental tissue and other tissues in the mother's body, the following is the percentage of tissue enlargement in the mother's body during pregnancy, fetus (25-27%), placenta (5%) , amniotic fluid (6%), blood volume (10%), breast and uterus (11%), extracellular fluid (13%), and increase in fat tissue (25%)(Magfiroh, 2017).

Weight gain during pregnancy is a factor that influences birth weight. The real linear relationship between pregnant women's weight and LBW has been widely known from various existing studies. Adequate weight gain during pregnancy is more beneficial for pregnant women. The risk of LBW increases in mothers with inadequate weight gain during pregnancy.(Khoiriah, 2016)states that a mother's weight gain during pregnancy is directly related to her baby's weight and the risk of giving birth to LBW increases with a lack of weight gain during pregnancy. Each pregnant woman's weight gain is different, depending on her height and weight before pregnancy, the size of the baby and placenta, and the quality of the diet before and during pregnancy. Based on BMI (body

mass index) calculations, weight gain during pregnancy depends on your weight before pregnancy. BMI calculations use measurements of body weight and height to estimate the total amount of fat in the body. BMI can also be used to assess the risk of heart disease, diabetes and other diseases in general(Ukah, 2019). The factors that influence the weight of pregnant women are estimated to be around 30% of the increase in pregnancy weight, consisting of: fetus, amniotic fluid and placenta; while the remaining 70% is expansion of uterine and breast tissue, increased blood volume, extracellular fluid, and fat deposits(Santos, 2018). The increase in weight of pregnant women is due to the growth of the fetus, placenta and amniotic fluid. Apart from that, there are changes in the mother's reproductive organs, such as an enlarged uterus and breasts, changes in the circulatory system, namely increased blood flow, causing weight gain during pregnancy.

The results of this study show that pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period out of a total of 66 respondents had an average weight of (64.83±9,800) which shows that the pregnant woman's weight is in the normal range. The mother's weight before pregnancy and weight gain during pregnancy is less (underweight) or more (overweight) than normal will make the pregnancy risky. A mother who is underweight will be at risk of giving birth to a baby with underweight or low birth weight (LBW). Meanwhile, if the mother is overweight or overweight very quickly, there is also a risk of bleeding or could be an early indication of preeclampsia or diabetes. Until this research was carried out, there was no direct influence of reducing or increasing weight in pregnant women on how the results of lotus birth delivery were carried out, however, ideal body weight for pregnant women will make it easier for births to occur without complications which will make it easier to implement lotus birth birth practices therein. .

Characteristics of Gestational Age of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on gestational age can be presented as follows.

Table 6. Frequency Distribution of Respondents Based on Gestational Age

Gestational Age	Frequency	Percentage (%)
Preterm	0	0
Aterm	66	100
Total	66	100

The results of this study show that the majority (100%) of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period gave birth at term. Labor is divided into four phases that follow important physiological transition changes in the myometrium and cervix during pregnancy. Based on gestational age, it can be divided into 3, newborn babies are likely to be preterm (preterm), full term (term) and postterm (postterm) (Cunningham, 2014). According to(Moutquin, 2008)Preterm can be classified based on gestational age including:

Gestational age < 34 – 36+6 weeks is called near term.
Gestational age 32 – 34 weeks is called premature.
Gestational age 28 – 31+6 weeks is called severe prematurity.
Gestational age < 28 weeks is called extreme preterm.

Preterm is a pregnancy of less than 37 weeks (Manuaba, 2010) in babies born preterm (preterm) whose body organs are not yet mature. This causes the organ systems in the baby's body to not fully function normally, so that in certain indications the baby is born preterm (premature) will be cared for in an incubator for a certain period of time. Term is the term of a full-term pregnancy, namely 37 to 42 weeks (Manuaba, 2010). This is the safest age because at this term the pregnancy is normal, mature and full based on the time of pregnancy. Lastly, postterm, a pregnancy that lasts longer than 42 weeks, babies born with a gestational age of more than 42 weeks can cause the baby to experience asphyxia caused by aging of the placenta so that the supply of food and oxygen from the mother to the fetus through the placenta decreases. The duration of pregnancy until term delivery takes around 280 to 300 days with detailed calculations as follows: gestational age up to 28 weeks with a fetal weight of 1000 g, if it ends it is called a miscarriage, gestational age 29 weeks to 36 weeks if labor occurs it is

called premature birth, age Pregnancy of 37 to 42 weeks is called term, and gestational age beyond 42 weeks is called post-term pregnancy or postdatism.(Sharma, 2021).

The results of this study show that the majority (100%) of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period gave birth at full term, which indicates that this birth is in line with the concept of gentle birth, namely providing more comfort to the child. mothers and babies, by improving the quality of health during childbirth starting from the preparation period for pregnancy, until the time the baby is born. However, this does not mean that premature babies cannot be given special treatment, namely lotus birth, in fact this birth will provide many benefits to premature babies, this is because delaying the umbilical cord can increase iron supply thereby reducing the incidence of anemia by 60% in babies, reducing intraventricular hemorrhage by 59% in premature babies, reducing netrotic enterocolitis by 62% in premature babies, reducing sepsis, and reducing the need for blood transfusions in premature babies (Courtney, 2020).

Characteristics of the Height of the Uterine Fundus of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on uterine fundal height can be presented as follows.

Table 7. Frequency Distribution of Respondents Based on Uterine Fundus Height

Height of Uterine Fundus	Frequency	Percentage (%)
Not appropriate for gestational age	14	21.2
According to gestational age	52	78.8
Total	**66**	**100**

The results of this study show that the majority of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period (78.8%) had a uterine fundal height that was appropriate for their gestational age. At the end of pregnancy, the uterine wall of the pregnant woman will begin to become thinner and softer. At the 36th week of pregnancy, the fetus descends, starting from its normal position towards the bottom of the uterus. This is due to softening of the pelvic floor tissue along with good movement of the uterine muscles and the position of the lower part of the uterus(Nilsson, 2020). At the 28th week of pregnancy, the height of the uterine fundus is about 3 fingers above the center or one third of the distance between the center and the xiphoid process. At 32 weeks pregnant, the height of the uterine fundus is half the distance between the xiphoid process and the center. At 36 weeks pregnant, the height of the uterine fundus is about one finger below the xiphoid process. At the 40th week of pregnancy, the uterine fundus descends three fingers below the xiphoid process because the fetal head has entered the upper pelvic inlet.(Magfiroh, 2017). The height of the uterine fundus can function as a tool to detect fetal growth according to gestational age. The measurement standard uses a measuring tape which can begin to be measured at a gestational age of over 24 weeks. Examination of the uterine fundal height includes; determining the location of the uterus, this is done by noting whether the fundus is above or below the umbilicus and whether the fundus is in the midline of the abdomen or shifted to one side(Daily, 2023). Next, determining the size of the uterus, in this examination, is done through palpation and measuring the height of the uterine fundus at the top of the fundus by the number of finger widths from the upper or lower umbilicus. Finally, determining the consistency of the uterus, there are 2 characteristics of the consistency of the uterus, namely a hard uterus that feels as hard as a rock and a soft uterus that can be felt, it feels hard under the fingers when the hand massages the uterus.

The uterus is a muscular organ shaped like a pear, which is lined with peritoneum (serosa).(Indrianti, 2023). During pregnancy the uterus will function as a place for implantation, retention and nutrition of the conceptus. During labor, due to contractions and the uterus experiencing enlargement during pregnancy, the uterine wall and uterine cervix open, the contents of the conception are expelled, consisting of the corpus, fundus, isthmus and uterine cervix. Measurement of uterine fundal height with Mc. Donald is a way to measure TFU that uses a length measuring instrument from the upper edge of the pubic symphysis to the uterine fundus or vice versa. TFU measurement is based on Mc theory. Donald can begin to be measured at approximately 22 weeks of

gestation. Several principles must be considered when measuring TFU using the Mc technique. Donald is: 1) the length measuring instrument (meter) used must not be elastic, 2) when measuring TFU, the mother's bladder must be emptied, 3) the mother's position when measuring her legs is bent. The purpose of this examination is to determine gestational age based on weeks, and the results can be compared with the results of the history on the first day of the last menstruation (LMP).(Safitri, 2021). TFU is in centimeters (cm), which is normal should be the same as the gestational age in weeks determined based on the first day of the last menstruation. If the measurement results differ by 1-2 cm, it can still be tolerated, but if the deviation is smaller than 2 cm from gestational age, there may be fetal growth disorders, whereas if the deviation is greater than 2 cm there may be twins, polyhydramnios, a large fetus.(Indrajaya, 2021).

The results of this study show that the majority (78.8%) of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period matched their gestational age, although there were (21.2%) respondents' data that did not match, but this can be tolerated because the difference does not exceed the normal limit criteria, namely around 1-2 cm. This indicates that pregnant women who give birth using the lotus birth delivery method do not experience difficulties or obstacles due to inappropriate uterine fundal height, and also from the results of fundal height measurements. With this diverse uterus, pregnant women can still carry out lotus births smoothly.

Blood Pressure Characteristics of Pregnant Women Who Give Birth Using the Lotus Birth Delivery Method at the Permata Bunda Maternity Clinic for the 2012-2019 Period

The characteristics of respondents based on blood pressure can be presented as follows.

Table 8. Frequency Distribution of Respondents Based on Blood Pressure

Blood pressure	Frequency	Percentage (%)
Normal	66	100
Pre Hypertension	0	0
Stage 1 hypertension	0	0
Stage 2 hypertension	0	0
Total	**66**	**100**

The results of this study show that the majority (100%) of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period had normal blood pressure. Pregnant women's blood pressure varies with age as well as additional factors such as maternal position, anxiety and cuff size. During mid-pregnancy systolic and diastolic pressure decreases by 5 to 10 mmHg. This occurs due to peripheral vasodilation due to hormonal changes during pregnancy. During the third trimester blood pressure returns to that of the first trimester. Blood pressure can be influenced by several factors, the first is cardiac output, the pressure against the artery walls is greater so that the volume of blood flow increases. The second factor is peripheral resistance. Peripheral resistance is influenced by the viscosity (thickness) of blood cells and the amount of blood plasma. High viscosity will produce high blood pressure. Apart from that, blood pressure is also influenced by the structure of the artery walls. If the walls have been damaged, blocked, and lost elasticity, blood pressure will be higher. Blood pressure is called hypertension, which is the result of cardiac output being too high or peripheral resistance being too high(Nilsson, 2020).

Based on the Joint National Committee (JNC) VII 2003, blood pressure is divided into 4, consisting of normal blood pressure, prehypertension blood pressure, stage 1 hypertension blood pressure, and stage 2 hypertension blood pressure, here is the table.

Table 9. Blood pressure classification based on Joint National Committee (JNC) VII 2003

Blood Pressure Classification	Systolic Blood Pressure (mmHg)	Diastolic Blood Pressure (mmHg)
Normal	< 120	< 80
Prehypertension	120 - 139	80 - 89
Stage 1 hypertension	140 - 159	90 - 99
Stage 2 hypertension	≥160	≥100

Blood circulation in mothers is influenced by several factors, including; increases the need for blood circulation so that it can meet the needs of the development and growth of the fetus in the

womb, there is a direct connection between arteries and veins in the retroplacental circulation, the influence of the hormones estrogen and progesterone increases. As a result of these factors, pregnant women will experience changes in blood circulation(Chen, 2016). Blood volume increases and the amount of blood serum is greater than the growth of blood cells, resulting in blood thinning (hemodilution), with a peak at 32 weeks of gestation.(Sutters, 2017). The number of red blood cells increases to be able to keep up with the growth of the fetus in the womb, but the increase in blood cells is not balanced with the increase in blood volume, resulting in hemodilution which is accompanied by physiological anemia.(Purwandari, 2016). Hypertension in pregnancy can be said if the blood pressure≥140/90 mmHg. Divided into mild-moderate (140 – 150 / 90 – 109 mmHg) and severe (≥160/110 mmHg). Hypertension in pregnancy can be classified into: 1) pre-eclampsia, 2) chronic hypertension in pregnancy, 3) chronic hypertension accompanied by eclampsia, and 4) gestational hypertension(Roberts, 2013).

The results of this study show that the majority (100%) of pregnant women who gave birth using the lotus birth method at the Permata Bunda Maternity Clinic for the 2012-2019 period had normal blood pressure, so they did not require additional or special intervention when undergoing lotus birth, and from a health perspective This will also support the benefits of lotus birth for the baby as an additional blood supplier of around 80-100 cc after 3 minutes of birth during delayed cord clamping conditions.

4. CONCLUSION

Based on the results of research conducted regarding the characteristics of pregnant women who gave birth using the lotus birth delivery method at the Permata Bunda Maternity Clinic for the 2012-2019 period, the following conclusions were obtained: From the results of this study it was found that (87.9%) of the research subjects were aged 20-35 years, (60.6%) were multigravida, (60.6%) had a pregnancy interval of more than 1 year, (100%) gave birth vaginally, had an average body weight of (64.83 kg), (100%) of patients gave birth at term (term), (78.8%) uterine fundal height according to gestational age, and (100%) normal blood pressure. There are suggestions that can be given to support this research even better in the future. For future researchers, they should analyze the relationship between the various characteristics that researchers have found to find out the cause-and-effect relationship between variables, for example case control and cohort. Clinicians are able to identify the various characteristics that have been studied in this research in each pregnant patient, so that appropriate management can be given. For pregnant women/prospective pregnant women who are about to undergo labor, they can use this research as a reference in choosing a gentle birth delivery method.

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